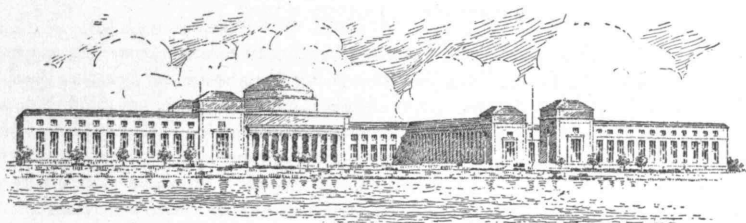


THE ALUMNI DINNER, MARCH 1, 1919, AT THE WALKER MEMORIAL

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THE ALUMNI DINNER

To you alumni of Technology who, scattered over the world, could not get home to the annual dinner on Saturday, March 1, the big love feast in the home which you all gave to the undergraduates who have but now taken possession of it—greeting!

There were a great many good things said that Saturday evening in the Walker Memorial, things which you, as Tech men, ought to know and will want to know. Nearly seven hundred of us—the largest “get together” since the Symphony Hall dinner—heard them and were enthusiastic, and now it is your turn.

The REVIEW thought it worth while enough to get a verbatim report of what was said, and we therefore commend the following pages to your real attention. Read President Henry Morss’s report of stewardship and learn what the Association has done to help win the war; read Governor Coolidge’s tribute to the Institute; read Walter Gordon Merritt’s stirring appeal for right and justice and arbitration in our labor questions—an address the most sensational of the evening and received with marked enthusiasm.

And above all, read and ponder Dr. MacLaurin’s statement of the case for the greater Institute, learn our difficulties and problems and get yourself in the frame of mind to do something about it when your time comes to do your bit.

It was a great evening!

WHAT IT LOOKED LIKE

Those of us who had seen the Walker Memorial only as a conglomerate piece of building, or even as a formal, shipshape barracks for the naval aviators, hardly recognized it on Saturday, March 1, for all afternoon the place was filled with old boys, come back to meet classmates at the reunions scheduled in the offices of the activities, or to enjoy themselves, as if they were undergraduates again with the facilities the old Union never had. The last naval aviator had gone a month before, and since that time the Memorial had been scrubbed and polished and painted and curtained and decked out with comfortable furniture, the activities had moved into their comfortable little offices on the top floor, and the whole Institute had attended a grand jubilee smoker as a symbol of taking possession, a real housewarming, at which the head of the student Institute Committee had been given the charter of the alumni's gift as a perpetual privilege to the boys who expect to be alumni some day. (There's a good story about that party somewhere else in this issue.)

In the comfortable lounging rooms on the second floor, with their clubby easy chairs and tables, the older classes had their meetings, and the younger crowded into the activity offices. But the real center of activity seemed to be in the basement, where the old grads mixed with the boys of today in the new, large, brightly lighted pool room, in the long bowling alleys and, especially, in the stem-winding, self-refillable shooting galleries where many a man just out of the olive drab showed that he hadn't forgotten what he had learned on the ranges and on the other side. Meanwhile, beginning at five, a brisk band shook the echoes in the big, barny gymnasium on the top floor, where all those who couldn't squeeze into the offices and were tired of waiting for a chance at the sports stood around and met all comers—socially, of course—and tried to talk above the strains of a reverberating jazz. Although, naturally, the bulk of the attendance came from the neighborhood and Massachusetts and New England, there were delegations from New York and even from Washington and points south.

At seven dinner started. There were nearly seven hundred seated at the individual class tables, a long array of alumni and officers whose names are dear to Institute men at the head table, under the bust of General Walker, the band again to keep singing going, Institute banners and all the class banners in their orderly color combinations hung around from the balcony where late the tired aviator babbled formulae in his sleep, and a battalion of student waiters served quickly and well the simple but excellent dinner.

One thing the notables lost out on! In front of the bust of General Walker descended a sheet and on that sheet were displayed cartoon movies about the little boy and his dog and the ostrich, and the tramp and his dog and the bucking broncho—and the notables craned their necks and got astigmatism trying to see what the seven hundred were roaring at. But they got their innings when Dennison led the songs—which he did in a very athletic manner—and to see Professor Kennelly, who still retains traces of an English environment happily almost sloughed off, puzzling out the lyric of "Yip-I-addy-I-ay" and then singing it as if he were little Tommy Tucker on a well-known occasion, was in itself worth the price of admission. Governor Coolidge didn't sing. We think he would make a better governor if he would. But maybe he attends too many dinners to risk getting the habit.

There was one interlude to the speeches which to all present was perhaps the most significant of the evening. Along the sides of the hall sat the members of the classes of 1918 and 1919, who had received their degrees, but had not yet been officially welcomed into the body of alumni, as the alumni, since the war started, had not

had any occasion wherein they might be welcomed. So after the Governor had spoken, the members of each class filed up through the center of the hall, to the accompaniment of cheers and applause from the older brothers who stood to honor them, and were welcomed without speech or ceremony by President Morss into the great body which the diners represented, and were given their banners, which at once were hauled up to the balcony, next to those of '16 and '17, thus completing the membership till 1920, when the next class will be received.

And they, as well as the speakers of the evening, were cheered prettily by the alumnae—the co-eds of the past, who, as Mr. Morss said, were just as good Tech men as the rest and got cheered for it—who sat with Mrs. MacLaurin at two brilliant tables down in front.

So much for the *mise en scene*! The coffee is gulped, the cigars lighted, the chairs pushed back, the waiters fold their serving tables like the Arabs and silently steal away—President Morss, beaming, rises to act as toastmaster and to give account of his stewardship. Gentlemen, President Henry A. Morss of the Alumni Association!

PRESIDENT MORSS: A year ago when we held the dinner here we dedicated this building. Tonight, we are here for what might be called a "housewarming." As you all know, we could not have our housewarming before because the building has been in the service of the government.

This meeting marks the first dinner since the new order of things as to the year of the Association. My predecessor, Mr. Hart, had the unique experience of serving a single term of a year and a half. Now, the year has been changed from the calendar year, so that my term of office, and the succeeding presidents', will end on the last of May. It seems to me that this is a little awkward. First, if we are to have graduation and alumni celebrations, I would naturally go out of office on the last of May, and the celebrations would be in charge of the incoming president the first week in June. It would be awkward for me to arrange a celebration for him to run, and it would be more awkward for him to have me arrange it for him. I think we shall have to interpret the by-law as it was interpreted before—that the outgoing president holds office until after the commencement celebrations.

The Alumni Association appears to be in a flourishing condition. If anybody doubts the interest of the Alumni Association in the Institute, I wish that doubter were here tonight. So far as I know, we never had so large a meeting as this as an Alumni function before. There are something like six hundred and seventy people here tonight. The membership of the Alumni is still growing. We get those who graduate in the natural order of events under the by-laws, and during the last year we have elected a great many associate members. We have two more Local Alumni Associations than a year ago, one at New Haven and one in West Virginia.

The finances of the Association are in very good shape. Two or three years ago the secretary and treasurer changed from the keeper of a deficit to the keeper of a fund, and I am glad to say that he still has a fund in his charge.

The committees of the Association have been doing their work to a greater or lesser degree during the past year, but of course they have been somewhat handicapped by the absence of men; also some of the committees have not been able to do anything owing to the war conditions, and their work was put aside for a while. The alumni fund, to which you have all subscribed, and with which this building has been partly paid for, amounts now to about \$598,000 paid in, and the income has amounted to about \$23,000 more.

Last winter and spring the work of the Alumni Council was not the same as it

had been previously, owing to the war conditions. These war conditions affected the Institute and they affected the membership of the Alumni Association and, of course, the Council. The service schools here were a large factor. They used this building, they used some parts of the other buildings, and they upset things a good deal. For something over a year we have had no field manager. Litchfield, '85, resigned on account of work he was going to do in Washington and we have not yet succeeded in getting a new manager. The executive committee chose Eaton, '85, but he says that he cannot accept. He has suggested for a field manager an excellent man, if we can get him, George Crocker Gibbs, now in charge of the Technology Bureau at the American University Union in Paris. (Great applause.)

The Council had one or two questions put before it on which it acted. The Technology Clubs Associated were planning a meeting in Philadelphia about a year ago. Owing to war conditions, the fact that everybody was busy, and the fact that the railroads were overcrowded, etc., they wrote to the Council for an opinion on the desirability of holding that meeting, and the Council voted that it was not advisable to hold it. The proposition as to whether a Tech Show should be held last year was referred to the Council, and the Council voted in favor of holding the Tech Show. It felt that such activities as the Tech Show were good things for the undergraduates and it was too bad a thing to let it go by. We also had the very good excuse that what the Tech Show cleared in money was paid over to the Tech Bureau, a war measure.

A good many of the committees of the Council have been disorganized by men being away. This became so serious a matter that the Council voted in the spring that if any committee did not have a quorum those who were left should join with the Executive Committee of the Alumni Association, and that the combination would do the work.

There was no formal alumni celebration last June. There was a graduation, and the members of the Alumni Association in this vicinity were sent a notice that the naval students would give a dress parade out on the parade grounds on the afternoon of graduation, and they were invited to attend. This year when the Council first met it, of course, was confronted with the problem of the S. A. T. C., which the government had instituted here at Technology. About the only problem which the Council could handle to advantage in connection with the S. A. T. C. was the recreation room which was provided when the barracks were built. We thought, at first, that this recreation room should be in charge of a Tech man and should be run by the Alumni Association, but as we studied the matter we found that there were serious difficulties, and we finally decided to turn the charge of the recreation room over to the Young Men's Christian Association, making it very clear to them that we would also welcome at all times any work, any activity, or anything which the Knights of Columbus, the Hebrew Association or anybody else wanted to do for our men. This went through very nicely.

At one meeting of the Council, the first meeting this year, we had Lansingh's report on the Technology Bureau in Paris. It was an excellent report, but quite long, and since it has been published in the TECHNOLOGY REVIEW, where you all have had a chance to read it, I am not going to dwell upon that.

On the screen tonight you have been shown various statistics. That was to save me the trouble of giving them to you, and it gives you a better chance to study them than if I recited them. But there was one thing shown which I wish to emphasize. The records show that there have been 2725 Technology men in actual service. In the Expeditionary Forces there have been 991. What seems to me very remarkable and a great compliment to Technology, is the fact that out of the 2725, 1834

held commissions; that is, 69 per cent. I think that is a wonderful showing and one of which we may all be proud. The Council voted at its last meeting that a committee should be appointed to work with a committee of the Faculty to publish a book which should be a record of all Technology service in the war—the service of the institution and the service of the various men. This would include not only those officially in the service, but we hope it may include some description, at least, of the men who are doing war work for the government. Of course, this number was very large and the work some of them were doing was very important. Also, it was voted to have a committee appointed to work with a similar committee of the Corporation for a memorial to those men who died in the war.

The activities of the Council have perhaps been a little different this year from other years. In former years we have had to act to a degree as advisors in the running of the Institute. During the past year, we have only discussed one matter of that sort. Dr. Maclaurin came to the Council Meeting and brought up the subject of what he called, "Reconstruction at the Institute." He told us that the reconstruction meant particularly reconstruction of the courses. He asked of the Council their opinion as to the need and desirability of broadening the course; that is, of giving perhaps classical, or at any rate, courses outside of the strictly engineering courses. I think it was almost the unanimous opinion of the men present at that meeting that the Institute men were a little inclined to be narrow and that the studies should be changed so as, if possible, to have a good, broadening effect.

Our relations with the undergraduates have been somewhat interesting. Undergraduate activities last year were a good deal handicapped by war conditions, and beginning in October were almost eliminated. The S. A. T. C. kept them so busy that they had very little chance to carry on their ordinary activities. If there were none, of course the Council of the Alumni Association could not help them; but almost before we knew it the S. A. T. C. came to an end. In December news came to me that the students were considering the re-establishment of their various activities and what could the Alumni Association do about it? We had a meeting of such members of the various advisory councils as were around here with several of the students, and we were very interested to find that the students were planning to start their activities promptly on the first of January. At that meeting the matter of the student tax came up. As the student tax had not been noted in the catalogue, Dr. Maclaurin was doubtful about the propriety of having the student tax paid. At that meeting a plan was arranged by which all of the students were obliged to vote as to whether they wished the student tax or not when they registered in January, and there was almost an overwhelming vote in favor of the tax.

After the S. A. T. C. was abandoned and before the student activities got going there were signs of trouble. You probably read in the newspapers, perhaps, about the near-riot which occurred out here in the great court one Saturday. Some of us were a good deal alarmed at that demonstration; and I am glad to say that I had a chance to make a few remarks about it at a big smoker in this hall on the last of January. The students had a smoker here at which there were over sixteen hundred men. There was considerable confusion owing to the large number, but I told them that the alumni did not think such actions were according to tradition. I also told them that I believed this was simply an overflow of spirits due to a lack of proper activities. On that evening the Dean, much to the pleasure of the students, announced that the Alumni Council had voted that there should be a field day in the spring to take the place of the field day usually held in the fall. This, I believe, will be held. At that smoker the students wanted me to present this building to them, and I told them that, representing the Alumni Association with such authority as it had

and believing that the students were able to govern themselves properly, I granted to them the occupancy and use of this building subject to such rules and regulations as the authorities of the Institute might deem advisable. I handed the chairman of the Institute Committee, the students' representative, a scroll showing this grant, and this will be posted in the building so that every one may see it. The Dean has suggested that some formality of presenting the building to the students should be carried out each year, as it would make the students appreciate the fact that the Alumni were interested in them. It will be necessary to do this each year on account of changes in the Institute body.

Probably the most important work of the Alumni Association has been the war work through its Committee on National Defense. The committee has raised some \$49,000, of which \$17,000 was subscribed by the members of the corporation. They have so far spent about \$41,000. \$18,000 was paid to the Woman's Auxiliary and \$11,500 has been sent to the Tech Bureau in Paris. It will apparently be necessary to continue the Tech Bureau in Paris for at least the balance of this year, and the cost to maintain it is about \$1000 per month. The Tech Bureau, as you know, is a part of the American University Union, and it has been of great service to the men "over there." Lansingh's report tells a good many details of that, and I think you have all been interested in what they are doing over there.

A very important part of the work of the Committee on National Service has been carried on by the Woman's Auxiliary, with headquarters in the Rogers Building. As you all know, when doing something for college men abroad was first mentioned, Mrs. Cunningham came forward and urged that Tech take up work for its men, and she subscribed most liberally in order that the work might be started promptly. Mrs. Cunningham has been assisted by Mrs. Bigelow, Mrs. Sedgwick, Mrs. Lord, Miss Walker, and many other women. I would like to say that these women are fully as good "Tech men" as we men are. (Applause.) Mrs. Sedgwick has had charge of the Workroom, which has sent all sorts of necessary articles to the men in Europe. The Auxiliary has kept records of the men in service, has had a system of communication with the men in service and with their families here. It has superintended the collection and distribution of books. Members of the Woman's Auxiliary have done hostess work in the service schools here at the Institute. They have also done hospital visiting. I wish I could express the appreciation which this Association should have for this wonderful work done by these women. I have an idea that most of us never will appreciate it unless perhaps we get an account from some man who has been over on the other side and who really appreciates what they have done.

Owing to war conditions, two rather curious things have happened. The Class of '18 graduated last June and has never been formally welcomed into the Alumni Association. Owing to the intensive training caused by war conditions, the Class of '19, due to graduate next June, was graduated last October, and they too, have not been officially welcomed into the Association. I did write a letter of welcome to both of these classes, but tonight we wish to welcome them formally—to have them understand what the Alumni Association may mean to them and what their connection with it may mean to the Institute. I have here the banners for the Classes of '18 and '19, and if the members of those classes will pass here in front of the table I will present the banners to the two presidents.

At this point the alumni of '18 and '19 marched up and were given their banners.

PRESIDENT MORSS: The Corporation of the Institute is known as a self-perpetuating body; that is, it elects its own members; but this is not wholly true, for it does not elect all of its members. Last November the people of Massachusetts took it upon themselves to elect the gentleman who sits on my right to membership in the Corporation, and a few other duties. We all know the Corporation is a powerful body, but with all of its power the Alumni Association gets ahead of it in one way. I mean that the Alumni Association, for many years past, has succeeded in persuading the Governor to come to at least one of its dinners during his administration, while, so far as I know, no Chief Executive has as yet attended a meeting of the Corporation. In spite of past history, I dare to hope that our present Governor will attend at least one meeting of the Corporation. I believe if he would, and particularly if he could attend the meeting where our president presents his annual report, he would hear something of great interest to him.

Our first speaker this evening is the most recently elected member of our Corporation. He is a college man among college men, coming from our much esteemed sister college, Amherst. We are honored by the presence of His Excellency, Calvin Coolidge, Governor of the Commonwealth of Massachusetts.

GOVERNOR COOLIDGE: Mr. Toastmaster, Mr. President, Guests, and Alumni of the Massachusetts Institute of Technology: Although I may not address you as fellow alumni, I suppose I am privileged to address the trustees as fellow trustees.

In accordance with what the toastmaster has told you of his long established custom, I have come here to bring you greetings of the Commonwealth of Massachusetts. That would be what you would expect, I know, of your commonwealth, because it has long been officially and through its government a supporter of the higher institutions of learning. When our first university was established, less than twenty years after the landing of the Pilgrims, the general court made a generous appropriation for its support. There is a tradition that the money was never paid over; but at least they showed their approbation of the project, and any one who has had any of the responsibilities of government upon him for the past two years would be glad to come here to express the great debt of gratitude that is due to this Institution, not only for the splendid support that its alumni—and I might almost say the undergraduates—have given to the government, but to the splendid work you have done here in training young men for war service. It is a pleasure, therefore, for me to come here and express to you the thanks of the government in that direction. But that, perhaps, is only incidental. The work of carrying on the war was something that came to all of us and we knew that this Institution would do its full share in supporting the government. But we owe it a debt of gratitude, not only for the work it has done in war, but even a greater debt for the obligations it has put upon us through its service to the public and to the commonwealth in times of peace. That is especially so in relation to the commonwealth of Massachusetts, and I might say of all New England in general.

This is not a part of the nation that is pre-eminently blessed with natural resources. Other places surpass us greatly in that respect, in their production of minerals or in the fertility of their soil. If we are to have any prosperity here it will be due in part to the favors we receive from transportation, both by land and by water, and in part from our ability as manufacturers, as a people who are engaged in the great industries of the nation; and it is because of the skill and enterprise of the people of Massachusetts that we are able to maintain ourselves in competition with the rest of the nation and in competition with the nations abroad. For that purpose, we are dependent upon the education, the skill, the intelligence and re-

sourcefulness of our people; and it is for the purpose of so maintaining ourselves that the government has felt warranted in supporting, as it has done, such institutions as your Institute of Technology. It is not so old as some of your sister institutions, but in the great work it has been doing it has played a part most honorable and successful in the upbuilding of the commonwealth of Massachusetts. So, as the Chief Executive of this commonwealth, I am glad to come here and express to you our thanks and our appreciation of the work that you are doing, and if Massachusetts is able to maintain itself, it will be because of the example and because of the help that we are to secure from just such institutions and just such activities as are represented here.

You have, no doubt, noticed, as I have, the reports that come from day to day of unrest in some parts of this commonwealth of ours. I do not believe that they are the cause of anything like discouragement on our part. I do not believe they are going to amount to very much. They are not representative of the attitude of the people of this commonwealth, and they are not representative of what the great mass and body of our population wants, whatever may be the case in some other part of the world. If, at any time, any of you doubt my opinion in that respect, I wish that you would come up to Beacon Hill and look about you and see spread out before you the great number of schoolhouses; see the innumerable church spires; see the towers of the higher institutions of learning; and then look out across the Charles River where you will see rising majestically the buildings of your own institution, standing as witnesses and bearing testimony to the ability of Massachusetts to maintain itself, and to its desire to carry forward the cause of civilization.

PRESIDENT MORSS: It seems to me superfluous to introduce the next speaker to this company. His name is Richard; if his name were John, I might simply say, "Speak for yourself, John," as he has so often and so kindly done in the past; but you know him as well as I do; you appreciate his ability and judgment as well as I do; you have confidence in him as I have; you respect him as I do; you love him as I do. Why say more? Dr. MacLaurin.

Dr. MacLaurin was greeted with prolonged cheering, which evidently affected him.

DR. MACLAURIN: Mr. President, ladies and gentlemen: Need I say that it is always a pleasure to me to meet a representative group of Technology men and to get from them the inspiration that comes from seeing their hopeful outlook, and listening, as I have done tonight, to their generous expressions of appreciation.

Now, you expect your president, on occasions such as this, to say something of the achievements in the year that has gone since we last met; but I feel myself debarred from entering upon that subject tonight because the year that has passed has been altogether too memorable in the life of Technology as in the life of the nation to lend itself to the kind of treatment that must be given within the limits of an after-dinner speech.

The year that has passed has been pre-eminently, of course, the year of the Great War and the Great Peace. I rejoice with you that in that great war and the prosecution of that great war and the bringing of the great peace out of that, Technology alumni have played a worthy part. I rejoice, too, that the activities of the alumni have had their fitting reflection in what has gone on quietly within the walls of the Institute itself. I think your president did well to direct your attention, as he did, to those impressive figures—the three thousand alumni who were actually found in active service. Think of it! Three thousand men!—a number which meant

practically all available within the normal limits of age that were prescribed, all that were available when you set aside that large number who were debarred from active service, or who served in the capacity of experts in the indispensable industries. I think your president did well to speak with pride of the fact that out of that three thousand alumni nearly seventy per cent were officers. You should bear those numbers in your minds and hearts with pride, for they represent a splendid achievement. You should be proud of them and proud of your fellows, not only for the number of their services but for their quality. Of course, you will keep in your hearts always the special meed of praise and respect for that noble band of Technology alumni who paid the last full measure of their devotion to the great cause. Inevitably in time you will raise a memorial to the mighty dead. Although this is not the time to think of it, it is, I think, the time to begin to think of the form that it shall take, but not the time to think of raising it. Your president has told you that a committee of the alumni had been set up to co-operate with a similar committee of the Corporation to think of that project, and I hope that any of you with good ideas will pass them along to that committee. The memorial need not be costly, but it certainly must not be paltry, and it must not consist of anything that would easily go out of date. It must be as imperishable as the fame of the men it commemorates.

As I am barred from looking into the past, I naturally look to the future. I want to tell you something of the problems of the future as they present themselves to my mind. I think one thing is abundantly clear—that the war has greatly enhanced the prestige of Technology. Technology alumni are men trained to do things, and in the critical times such as those through which we have passed and are still to pass the men trained to do things are the men most in demand. As a result of the war you will find, I think, that those types of education will be checked which lack fixity and clarity of purpose; and those institutions which seem to grope toward vague ends will cease to be attractive as before and they will constantly be pushed by the institutions, of which Technology is a type, that know very clearly or see very clearly what they are trying to do, and do it. I hope you realize the significance of the figures to which your president referred and which were thrown on the screen. There are nearly two thousand students at the Institute today, although the war is hardly over and although there are scarcely any seniors, owing to the conditions which already have been described. The Freshman class now consists of nearly nine hundred students, while a little over five hundred was a maximum before the war. If this goes on, we shall have to face the problem not of two thousand, but of three or four thousand students within a few years. Concerning the difficulties of that problem I may presume upon your patience.

Just what are those difficulties and what is the real problem? I think you gentlemen recognize clearly enough that any institution like ours, or indeed any educational institution, must require primarily three things: suitable buildings, an appropriate organization to guide and teach, and enough money. The buildings you know, or should know. They have recently been dedicated in your presence to the great ends for which they were designed. They were designed with the idea of providing easily for two thousand students and for twenty-five hundred in a pinch. All indications show that we shall have at least twenty-five hundred next year, so we will have to begin pinching right away. Within a year from now we will begin facing absolutely the limiting of our numbers or the extending of our plant. Organization, the second thing, is the all-important one. I need not remind you that it is infinitely more important to Technology than any other school to have the right kind of organization, imbued with the right spirit and bearing the right traditions. The organization of Tech-

nology, adequate as it is to care for two thousand students, could easily be extended without any very large or proportional expense to care for three thousand students. The one real problem is money, the financial problem. There is nothing new in presidents speaking of financial problems, and I am not proposing any appeal for funds: I simply want you to understand what this financial problem is. It is curiously misunderstood by the community and even by the alumni. There has been some talk in the newspapers within the past few months of the crowded conditions of our laboratories and classrooms. I am constantly met by friends who congratulate me on that condition, and they tell me how pleased I must be to be free from all financial worries. So I am reminded of a discussion that I had a few years ago when the Constitutional Convention was in session, with a member of that distinguished body, while we were talking of the Anti-Aid Amendment, since incorporated into the constitution. I pointed out that the amendment, whatever its merits, would have at least one serious defect. It would check, as I saw things, the progress of higher technical education in this commonwealth, and I reminded this gentleman of the facts to which His Excellency has directed your attention tonight. I told him that the welfare of the State demands the maintenance of the very highest standards of education of this type, for unless Massachusetts excels in men it must inevitably go down, handicapped as it is by natural disadvantages as compared with many other states. This gentleman said, "Why, I recognize all that, but why worry? I see nothing to disturb me. The Legislature doubtless, in its wisdom, will later provide adequate scholarships to pay the fees of the men who will go to the higher technical institutions in the commonwealth. So you will have all the students you need and all you want, and the commonwealth will have all the trained men it needs." How fine and how simple, yet how discouraging that well-meaning men charged with grave responsibility should so completely fail to understand the real, vital importance of the problem. He doubtless knew, if he had only reflected, that there are very few institutions of high grade—and certainly Technology is not one of them and cannot be one of them—that meet their expenses through the fees that are charged.

The facts are: The type of education upon which we are embarked has to be of the highest, so it necessarily costs more than any other type of education. You cannot produce a high quality of product on low costs, or the low costs that would be represented by any fees that are possible, unless you make your institution something for the very few who have the means to pay the whole cost. As you know, at Technology the fees are \$250 per annum. It costs for two thousand students about a million and a half dollars, being an average of about \$750 per student. Now, this doesn't mean, of course, that every individual student costs \$500 more than his fees; or, at least it doesn't mean that if one student goes away you save \$500 or if a new student comes in you lose it. Unfortunately things do not work out in that way, and the reason is too obvious to mention to men of your intelligence. The fact is, there is necessarily a large difference between the cost of education and the fees that you can possibly receive.

Now, what would be a really satisfactory financial condition for such an institution as ours? I think it would be, say, if this state of affairs prevailed: If you had enough endowment money given you to pay for your buildings, equipment for those buildings and to maintain those buildings and equipment and take care of the overhead administrative expenses, and the fees simply large enough to cover the actual cost of instruction. That, I think, would be a satisfactory condition because it would enable you to settle the size of your institution with reference to the real needs of the Commonwealth, or the nation, and not with reference to the actual accidental circumstances such as those which would otherwise determine what you would do.

The condition which I have described was happily the condition of Technology before the war, but the war has changed all that, upset all calculations that were then made, and upset them for reasons that are easy to understand. In the first place, it has enormously increased the cost of maintaining these buildings owing to the increased cost of labor and materials. In the second place, it must raise in the future the cost of instruction, for you simply must meet the rising cost of living by some reasonable increase in salaries or suffer by what you fail to do. So, it has come about that through war conditions we are faced with the really difficult financial problem. Those difficulties would have been slightly diminished if the plans that we had in mind some years ago could have been carried through. You will remember that only five years ago we celebrated with much acclaim the marriage between Harvard and Technology, and now we seem to be drifting towards divorce. That marriage was designed with only one aim—to exercise the utmost economy in the community in the use of funds that were available for this great end. It had no other purpose. I say, it seems to be drifting into failure and if there is any good left of the experience that we have had in these five years, it is something like this: We have actually proved, and it is no longer possible to doubt it, that Harvard and Technology professors could live together in peace and harmony. Curiously enough, they found by that simple process of living together those differences of ideas about which so much nonsense has been written or spoken. Unhappily, the experiment didn't last long enough to bring home to many people who were interested in it some of the very fundamental facts in the relations; it didn't last long enough to bring home to many the significance of the simple arithmetical statement that Harvard paid \$100,000 per annum for its expenses where Technology spent about \$1,500,000 per annum. However, it is useless to discuss such matters now. I have no such intention.

We have to take the world as we find it and face the facts as they are. The fundamental fact today is, if we are to expand, if we are to meet the needs of the nation and the commonwealth, as they seem to be expressed by the popularity of our system of education, then we need more money. I needn't tell you, because you know it, that these are very poor times for getting money; yet we are going to try to get it, and if we do not succeed to the utmost extent of our hopes or expectations, it is possible that we may have to resort to the expedient of adding somewhat to the fees. That is at least something that we must consider, and I have already said that it would be a reasonable policy to pursue to raise the fees to such a price as to make them pay for the actual cost of instruction, everything else—and the everything else is a large figure—being provided from endowment. If we raise the fees, I hope something will be done by way of additional scholarship endowment to take care of that large body of deserving men, able men who cannot afford higher fees and whom it is highly desirable in the interest of the commonwealth and the nation that we should have within our midst. If we fail to secure all that we need, then there is only one thing for us to do—we must limit our numbers. It must always be borne in mind that unless we have adequate endowment or adequate fees, we cannot possibly grow in numbers without lowering the standards of our education, and we must never do that.

Now, I have presumed sufficiently upon your patience, but I would just like to add a word more with reference to the problem of limitation of numbers, for that, too, is a problem not without difficulties. It is easy to say "limit your numbers to two thousand or any other number," but to do it wisely is no easy task. One of the difficulties arises from the fact that no scheme which has yet been devised for settling entrance requirements is satisfactory, in the judgment of those who have had experience, for selecting the best men. The mere screwing up of the entrance requirements

so many points doesn't do the trick at all. Also, the entrance requirements ought to be determined not by some ideal theory as to what they should be, but by what the preparatory schools actually do and can do. If you raise your standards beyond that level you limit the school to just the very few who can afford special preparation for entrance. The hope of Technology in the future, as in the past, is to be able to attract men from all classes and all places so that it may be a real "university" in the original meaning of that much abused term. I wonder if you realize what a "university" is in its historical sense. It does not mean, as is popularly supposed, a place where men study all things; that is not the idea of a university, or not the original idea. The original idea of the university was that it was a place to which men came from all parts to study. The fundamental idea was that it was a university of nations, to which men came not from a single locality but from many. If that is a test of a university, then there is no place in this country entitled to be called a "university" more than the Massachusetts Institute of Technology. As you know, the men at Technology come from all states of the Union and scores of foreign countries. There is, in fact, more than twice as large a proportion of foreign students in Tech now than any of the great universities of the land. These are significant facts which you will do well to bear in mind when you are thinking of policies for the future.

As I said, I must not presume longer on your patience, and I owe you some apology for presenting these figures and facts which are apparently dull. But I have presented them in a hope that there will be an illumination in your minds of their apparent dullness by the deep things for which they stand; and that, after all, you will agree with me that the hope of America lies primarily in maintaining the highest form of education to be found anywhere in the world. War has ended one era, the end of the war has opened up a new era, and in this new era as individuals and as a nation we are called upon to play a great part, and knowing that we can do nothing too good for the training of the young men and women who must bear the heat and burden of the coming day, Technology will never be content with anything but the very best in the field that she has made her own. As in the dark days of old she rallied to her cause innumerable friends, so in these present days of power and prosperity she can do nothing less than go forward from strength to strength.

PRESIDENT MORSS: In planning the speakers for the evening, it occurred to me to choose as a subject one of modern scope which would be of interest to you. When I once chose the labor question, it was easy to find the man, as I knew of some one who could speak with knowledge and authority on the labor problem. He is a Harvard man—an attorney who has had a great deal to do with labor problems and labor litigations. He has always been on the side of law and order. He has had broad experience. He has had more; he has had experiences some of which have been very exciting. I remember hearing him relate one incident, when he was about to go to a certain town to do work, under order of the court, he was warned that if he went to that town he could never get out alive. He went there; he did the work; he is here tonight. I take great pleasure in introducing Mr. Walter Gordon Merritt, of New York.

MR. MERRITT: Mr. Toastmaster, President Maclaurin, ladies and gentlemen: It has been a fine evening and a varied entertainment. We enjoyed the ostrich, bucking broncho and the bulldog; we got the greatest pleasure from your Governor, from your devoted toastmaster, and from the beguiling Dr. Maclaurin. (Beguiling.)

Your toastmaster has asked me to speak on the labor problem—a very easy

task! It is like religion, you can say anything you want to upon the subject and no one can prove you are wrong.

As we look over the field of social and industrial facts with the conflicting ideas battling for supremacy, with ardent leaders ready to die for their convictions, we are all brought to the one ejaculation: "Where do we go from here, boys?" There is a backing up in the established industrial order; there is an unsettling of the settled ideas; there are few plans but what meet with challenge from large groups of people. Any one who attempts to speak for employers' associations realizes that if he attempts to speak on the one side he meets with criticism from one wing, and if he attempts to speak on the other side, he meets with criticism from the other wing. On the subject of criticism of unionism you are "damned if you do and damned if you don't." There is no uniformity of ideas on this subject any more. There is a breaking up of the stronghold of conservatism. That, I think, is perhaps the most obvious fact and one of the most underlying facts in the industrial situation.

I sometimes think that all great human conflicts come from barriers to human understanding, and that if we can remove those barriers, ideas, like water, will seek a common level. For that reason I am in accord with the popular note of today which places in the first rank of all solutions of the labor problem co-operation and conciliation. Will the employers and employees continue to operate the industrial machine without applying this industrial lubricant, or do they prefer to wait until the heat of friction chokes the bearings? We must have diplomats in the factories handling the individual employees and eliminating those petty ideas, petty tyrannies and jealousies, which not only jeopardize the morale of the individual factory, but jeopardize the peace of the nation as well. We must resort to co-operation in every sense of the word, for without it men will not work together in furtherance of common aims or in the adjustment of rival claims. Without it you cannot expect to avoid opposition to efficiency, opposition to improved machinery, intolerance of the rights of employers and property, and intolerance of the institutions of the nation.

Now, that isn't my subject tonight. I have a whole speech prepared on that subject, but I am not going to deliver it. My subject is: "Industrial Warfare and Public Policy," or, "The Strike and Public Policy."

In the pursuit of the program of industrial conciliation and co-operation, right must not be compromised with wrong; there must not be sacrificed the sound principles of government and justice. If I were to criticize the policy of the administration during the last three years, it would be that the splendid liberality toward labor has not been accompanied with the firmness for right; that such fundamental principles as responsibility before the law, or the right of a man to work for whom he pleases, when and where he pleases, or his right to join or not to join a union, have not received the support which they deserved; that such undoubted wrongs as objection to arbitration and defiance of the courts have not received the condemnation which they deserved.

Now, the strike, at the most, is an unpleasant necessity. No one has ever yet invented an expedient which seems to adequately care for the rights of the social life of the workmen. Its virtue depends upon coercion and injury, and its justification is a social necessity. But in no other way does municipal law in civilized countries recognize any instrument which is so barbarous; so injury and coercion are calculated to stir up rancor, hatred and antagonism. The reason for the strike is one which is unanimously agreed upon by all people—the concentration of power in the hands of one great company places it so that the individual worker is not upon a fair basis for bargaining, and standing by his own rights does not receive fair consideration; so society, as a matter of social expediency, has said that men must bargain

collectively and have the right to quit work in a concern if their position is to be properly maintained, if anything like an approximation to industrial democracy is to be obtained. But there is an old adage in the law, that where reason ceases the rule ceases; so it is my conception that the strike, or industrial warfare, should never be tolerated except where it is necessary to pit economic force against economic force in order to eradicate industrial injustice. The object of society should be to eliminate premature, unnecessary and unjust strikes without impairing at the same time the usefulness of a strike as an instrument of last resort to protect the rights of the workers in private industries.

The strike is an implement of public service, and through its use labor has been able to direct attention to the needs and problems of the workers. There is many an employer who has never known a strike, but who is continually influenced by the fear of it. The time has come when you must distinguish and society must declare where its proper function ends and where its usefulness becomes anti-social and intolerable. To say that a strike may be organized, maintained and fomented for all purposes is ludicrous. Since when has uncurbed human power halted at the portals of justice?

Now to deal with this subject. I want to distinguish between strikes against the government, strikes on public utilities, and strikes in a private industry. As to the first: Above all things, the American people should never tolerate political strikes, or strikes against the government. We are a free government, and a resort to force against this government must not be permitted. The increasing frequency of such insurgent movements in Great Britain and the United States in the last few years and the laxity of a steady public condemnation of them present here an issue of national necessity. Faced with strikes against the government our legislators did not condemn them as they should, for they dared not do otherwise. But bad habits were thus formed, and the return to peace must be marked by a firmer attitude or strikes against the government will become a weapon far more powerful than parliament or the ballot. In January the trades unions threatened to throw London into darkness unless the government would intervene in the Glasgow strike and establish a forty-hour week. Mr. Thomas, the head of the labor unions, declared: "We can now say to our unions, 'You are in a position to say to the state—unless you do what we want we will paralyze commerce.' " He referred to the sovereign powers of the workers. Gentlemen, the sovereign powers of the people of this country are at the polls! There is now threatening in Great Britain a strike of the miners, although Lloyd George has declared that it means not a war with the mine owners, but a war with the state. The transportation companies have declared that if the government interferes they will strike to prevent the movement of troops. The Seamen's Union has twice taken the administration of foreign affairs into its hands. It struck to prevent the transportation of government delegates to the Stockholm Conference; and now it declares that, regardless of what may be done at the Paris Peace Conference, it will never permit the transportation of German made goods. These and similar activities have forced Mr. Andrew Bonar Law to declare that against such strikes the communities must be protected to the utmost.

In this country the drift is in the same direction. In the fall of 1916 the railway unions, supported by the American Federation of Labor, refused arbitration by government agency, declaring that they preferred to trust their interests to their economic might, and prepared to enforce it. There is where the government should have taken its stand, but the question drifted on until in the spring of 1917 when the country was in great peril these same railroad unions threatened to strike because they were dissatisfied with the situation and the decision of the Federal Courts, which upheld the Adamson act. Again they won, and shortly afterwards the Supreme

Court rendered its decision. Gentlemen, I trace this present extent of anti-social strikes in this country to that event. There was an enormous blunder made then. There is a time to yield and a time to stand, and then was the time to stand! And I say to you, if in that fateful fall of 1916 this country had stood firm to the principle that there will be no organized and industrial warfare when government intervention and arbitration are available, then the industrial history of the country during the last two years would have been different. The prospects for industrial peace for the present and for the future would have been brighter. Mr. Garretson, speaking for the railroad brotherhoods before Congress, asked that the railroads be owned by the government and operated by the brotherhoods, but reserving at the same time the right to strike in the event the government conduct did not measure up to the standards of class dictation. Isn't it time for society to disillusion some of these men and to give some kindergarten instructions as to the difference between democracy and Bolshevism?

I wish to point to the fundamental distinctions of a rule by the classes and a rule by the people. There is no room for resort to force in this government. There is no room for resort to industrial warfare when peaceful, disinterested agencies are available for the aggrieved party for adjustment. The time is coming when every labor union has got to be put to the test, "Are you, or are you not, with the government?" The words of President Wilson to President Hutchinson, of the Carpenters' Union: "Will you upset, or will you co-operate?" The world will never be safe for democracy until government by strikes shall perish from the earth! And if this struggle goes on with a class attempting to lay profane hands on the altar of government to make it a tool for class purposes, then democracy will fail and we will have a dictatorship of the proletariat, or a dictatorship of vested interest. In the long run it would be a dictatorship of the vested interest, and the workers would lose.

Now, speaking for a moment on the subject of strikes on public utilities: You know why they are called public utilities? It is because the habits, activities and comforts of our own lives are so essentially dependent upon them. The law has long since realized that the state has a right to step in and say to the public utilities at what price they shall transport passengers and merchandise. Isn't it time that we extended that same principle to the regulation of labor? Are not wages a component part of this rate? Aren't regulated rates and unregulated wages a contradiction in terms? Can you protect society against extortionate charges on one hand unless you protect them on the other. We must substitute compulsory arbitration in the form of commission regulation to protect the rights of the workers against selfish employers of the public utilities and abolish in that connection the right to strike. I tell you, gentlemen, if it had not been for the decision of the United States Supreme Court some twenty-five years ago in the famous *Debbs Case*, which declared the combinations to prevent the transportation of scab Pullman cars illegal, we would have been confronted with combinations today to dictate what articles could be transported from the dealer to the consumer. We took a firm stand on it at that time and there has been little revival since. If we take a similar stand on the question at issue, that the commerce of the nation shall not be paralyzed by such disputes, public opinion will rally to the support and you will put it through.

Now, when we come to the question of private industry, where self-reliant and ambitious employers and employees must be given free scope to exercise their own talents, and where the right of organized action on the part of the workers is a necessary part of our economic equilibrium, we must travel more cautiously. The workers, employers and society as a whole are opposed to compulsory arbitration in private industry; and so am I. Is there not a middle course? And this

particular thought tonight is my original contribution to the subject, so far as I know.

Can we not make strikes under certain circumstances so unattractive and so hopeless, and arbitration and observance of agreements so alluring, as to finally break up this strike habit and lead people to accept the more orderly method of adjustment? My clear thought on this subject is, that no strike should be allowed to take place until, first, all methods of conciliation have been tried out; and, secondly, no strike should take place in violation of reasonable agreements. Look at these three propositions separately. A strike in advance of conciliation is wanton, because conciliation may prove it unnecessary. This is in accordance with the professions of all the interests which declared that a strike is a weapon of the last resort. Next, strikes must never be declared against the person who is willing to arbitrate. He who is afforded access to the tribunal of reason must never resort to the tribunal of force. Every employer should be faced with the alternative: "Will you arbitrate, or shall we strike?" and if he is willing to arbitrate, that should be a guarantee, so far as the power of the state is able to make it a guarantee, against the conduct of industrial warfare against him. That isn't compulsory arbitration. He doesn't have to arbitrate if he doesn't want to. He can go back to the old method of industrial warfare; but no strikes or industrial lockouts should be declared as a method of industrial warfare when the party against whom demands are pending is willing to put the matter up to a disinterested tribunal. Industrial warfare must never be conducted as a means to further industrial injustice; and industrial injustice is measured by the willingness to submit to arbitration, and must always be the price of industrial peace. That has many advantages. Parties don't want to arbitrate and draw in a third party all the while, but when they see that they must arbitrate or else engage in industrial warfare, they find themselves much more ready to conciliate. Here our program squares with the program of the League of Nations, which seeks to promote the observance of agreements. This program is in accord with the spirit of the times. It squares with the standards set forth in the League of Nations which seeks to substitute conciliation, arbitration and adherence to agreements in place of clash of rival forces. You know that program as well as I. It provides that none of the subscribers shall declare war until first there has been arbitration or inquiry by the Executive Council, and even then they will not declare war until three months after the arbitration, or the recommendations of the Executive Council; and lastly, to never declare war against those who comply with the arbitration and recommendations of the Executive Council.

Now, there may be obstacles in the way of establishing an international force without conflicting with the constitution; there may be difficulties in getting a super-national force to carry out this great plan. As to those things, I have nothing to say, but if those principles are right, and if there is the difficulty of setting up an omnipotent force which is powerful enough to force its will upon nations, then surely such principles are applicable within the nations themselves where society is capable of forcing its will upon every section of society. There is just as much need for the application of those principles within the nation, for I believe that the dangers of clashes between classes are as great as the dangers of clashes between nations. Of what avail is it to set up an institution of that kind as between nations with the application of great human principles of that character if we are not prepared to apply them within our own house? We hope sometime that we may be able to get legal regulations in furtherance of such principles, but we are now trying to put that program into effect by writing the principles in definite agreements between capital and labor so that they will become established and control the conflicts between these two

great bodies. I believe it is the duty of an employer who is extending the principle of profit-sharing among his employees to insist upon it as he holds out these additional funds, on the one hand, that society shall be protected by the insertion of reasonable principles of adjustment, on the other hand.

Now, we all hope that there is to be a return from the rule of force to the rule of reason—that might will bow its head to right. We know that soon our minds will be concentrated more on the issues between classes than upon the issues between nations. Our prophecy has not come true, as we had hoped, that this great war would lead to bridge the chasm between classes, but we now know only too well that the class conflict has shown itself durable enough and powerful enough to survive this great world war—this great world cataclysm—the war which opened as an earthquake many institutions and has left the foundations of this conflict unshaken and has left us heir to responsibilities that are appalling. Let us not delude ourselves with the thought that things are well enough. Let us trample under foot the temptations of complacency. Let us bend our energy to the creation of forces for promoting international union, for the creation of agencies which will guide the ship of state through the danger zone.

These are my convictions which lead me to reach out here and elsewhere for new plans and new aims, and for him who thinks that things can go on in the old groove I have no message. Will we have the political genius and courage to distinguish between the strike as an industrial warfare and the strike as a means of economic adjustment, having fought a world war against rule by force, and having committed ourselves before the world as against this rule of might? Will we have the faith to apply those ideals at home? If, at the outset, this country had been faced with a strike solely as an insurgent movement against government intervention, the issue would have been seen clearly and we would have dealt with it as such. Unfortunately, the strike, and almost unnoticed, has risen as an insurgent movement, has become confused with the strike as an economic movement, and almost unnoticed, has ridden with it into the market place of public conception. We will have none of the English policy which exempts labor unions from law; we will have none of the French syndicalism with its revolutionary aims, nor will we have any of the Swedish policy where the employers recognize the right of their men to carry on a political strike. American people must have a policy of their own. America, the land of the open door and the open shop; America, the birthplace of liberty, must adopt a truly American policy untinged by hatred of sovereignty, filled with the hope and ideals of the new world and with a full comprehension of the fact that democracy is a "Government of the people, for the people and by the people," and which means above all things a government to which all people owe allegiance of loyalty and obedience.

Mr. Van Rensselaer Lansingh, '98, had also been scheduled on the program to speak, but as the hour was very late when Mr. Merritt finished his stirring address which was heard with much enthusiasm, and as most of the diners had already heard or read Mr. Lansingh's story of the Paris Bureau, he very gracefully offered to forego his rights. The dinner, therefore, broke up, having been, in the estimation of all who attended, an unusually stimulating and notable evening for the future of Technology.

THE MEMORIAL HOUSEWARMING

At last the undergraduates are at home — a great festivity celebrates their taking possession

IN the summer of 1916 the alumni of the Institute held a glorious jubilee. They came from the far corners of the world to see that the new buildings which were to house their alma mater were properly dedicated, and they went away satisfied. Those new and perfectly equipped buildings had received their baptism in a manner befitting them: rockets had blazed and roared, searchlights had flared brightly across a benignant sky; the Masque of Science had been danced gloriously under radiant lights; the "Bucentaur" had successfully navigated its perilous trip across the Charles; the proper orators had spoken the proper words in the proper places; and the cornerstone of the Walker Memorial had been laid.

Then the alumni went away and in the fall the students came, proud of their new home, a little in awe of it, and not a little depressed. There was no place they could call their own. The activities rigged up little cages, that looked suspiciously like chicken coops, in the basement of Building 1, and talked hopefully of the time when the Walker Memorial would be completed. Faculty and students alike patronized the "Caf" in the basement of Building 2, and talked hopefully of the time when the Walker Memorial would be completed. Every one was watching the great pile of stone and cement take shape and in it finding consolation for innumerable discomforts because some day the Walker Memorial would be completed.

And in the course of time it was, but before the many student dreams could be realized America decided to cast its lot with that of the Allies in cleansing France of its scourge and in saving the world from the Hun. That changed everything. Instead of the Walker Memorial resounding with the crack of a ball against tenpins, the jazz of a dance orchestra, the shouts of a healthy crowd over a wrestling match, it rang with the clear call of the bugle, the sharp words of command, the dull thud of rifle butts. The new building which had been dedicated to rest and play was filled with hurrying, bustling lads in olive-green uniforms, now in silent line at attention, now in mess formation, now at fatigue, perhaps swabbing the "main deck," or rushing down the "larboard gangplank." The Walker Memorial had become a "training ship" for naval aviators; the Institute activities moved to the little Stone & Webster construction building, and the students as a whole continued to wander aimlessly down the corridors with no place of their own at all.

But even world wars come to an end, and in January of this year the last student aviator packed his little locker trunk, clutched his discharge in one hand and his transportation in the other, and departed for the old home town, leaving the Walker Memorial silent, empty, and alone, a big, healthy child two years old that had lived a phenomenally active life with a strange and unloving family, which had suddenly left it to those who would understand and cherish.

The whole Institute breathed a sigh of relief and thanksgiving. At last one could eat a meal at the Walker Memorial without feeling like an unwelcome intruder; at last a student could play a pleasant game of pool or bowl a private tournament; at last there would be a place to spend an idle hour smoking, talking, or reading; at last the activities would have a real home. The dream of years was at last realized:

the Walker Memorial was built and was being used for the purpose for which it was intended.

Such an occasion demanded celebration, a celebration befitting the building and all that it stood for. The Institute Committee decided upon a smoker, but not an ordinary smoker—oh, by no means—but a smoker such as was never known before; one, in fact, which combined all the joys of a banquet, the movies, vaudeville, a general hurrahing celebration, and at the same time possessing the dignity befitting a genuine state occasion. Such was the plan, and the greatest compliment that can be paid the committee is to say, and truthfully, that they brought their plan to complete realization.

That smoker was the real dedication of the new Institute. The great reunion in 1916 was the formal occasion that let the world know that the Massachusetts Institute of Technology had moved to its new home; but as far as putting the thing in the new buildings, which would make of them a university, it counted not at all. Any one with sufficient money can build buildings, equip them, and pay professors to hold classes in them, but it is only when the students begin to live in those buildings that they are more than buildings, and since 1916 the students of the Institute have not lived in the true sense of the word in the new buildings. They merely came to them, received certain instruction for which they paid, and departed for more congenial haunts.

True, the activities continued up to the dark days of the S. A. T. C., and the "Tech" survived even those; but after all, the life of the various activities depended upon the courage of a few brave souls who were willing for the sake of the future to give their time to them even in the face of continued and often violent opposition and criticism. It was felt by many people that war time demanded a grave and studious mien; that boys should not dress in fluffy skirts and kick unscientific heels behind the footlights; that the time given to athletics could be better spent in the laboratory or on the drill field, that the sudden birth of the Woop Garoo was a demonstration of a hussy spirit that had better be crushed and soon. However, the activities struggled on, and while they managed to exist, they did not reach the student body as a whole. To all intents and purposes, the Institute was for three years a real "educational factory," and it was not until the night of Friday, January 31, when the big smoker was held, that the old spirit, born and reared in the Rogers Building, was awakened and really transferred over to the new Institute.

And now for the smoker itself. No one person can describe it, for no one person could possibly see it all. A three-ring circus is at least all before one's eyes, but the entertainment at the smoker was scattered over three floors, and no matter where a man went and how much he was enjoying himself at a particular time, he had the uncomfortable feeling that he was missing something worth while some place else. Let's start at the top and work down.

The gymnasium, which is on the top floor, but none the less a gym, furnished the proper setting for a number of wrestling and boxing matches, as well as for some less primordial entertainment by the musical clubs. Representatives of the various activities held open house in their offices which are also on the top floor. Hardly any of these offices are really large enough, but they are permanent and they are so much better than anything known at the old Union that only praise need be given them. However, one is inclined to ask, "Why the squash courts?" There are four of them—count 'em, four—and they occupy much valuable space which might well have been used. To the average student "squash" means a yellow vegetable—or is it a fruit?—that grows on a vine and makes into better pie than pumpkins do. We venture to prophesy that those courts will never justify their existence, and

because they do exist and take up needed space, such organizations as the Walker Club must continue homeless. It is quite useless to think of changing them into offices or club rooms because, like the main library, they are lacking in two more or less essential accessories, light and heat.

We shall skip the second floor because at the time of the smoker the lounging rooms had not yet recovered from their treatment at the hands of the naval aviators and were being cleansed and repainted. The same condition existed in the lounging rooms on the first floor.

In the main dining room the smoker proper took place. To begin with, every one was fed. That is not remarkable. That they were fed well is not remarkable, but that they were fed free is, and we venture to say that more than one curious undergraduate came to the smoker to see just what sort of a meal one could get for nothing in these days when an egg is a luxury and a ham sandwich a dissipation. During the dinner, and we repeat that it was a very good one, the eating became a secondary consideration. There were movies to look at, movies much too funny to be shown while one is drinking coffee; speeches from the leading members of the various activities to listen to; almost constant music from a very little observed orchestra; and then another movie or perhaps a burst of song when the orchestra swung some popular melody above the cheerful banging of the trays. It was a very gay party, gray haired, but not over-dignified professors rubbing chummy elbows with bright-eyed, flushed-cheeked undergraduates, who shouted to each other that this was the life and, thank God, the war was over; young instructors almost forgetting the weight of their years and grinning in joyful appreciation, perhaps in a thoughtless moment even singing a bit; an occasional co-ed flashing by with a gay smile for the assembled masculinity, her light giggle rippling high and clear over the bass roar beneath; oh, it was a "big night" all right and there was no thought of taps to spoil the fun.

Dr. MacLaurin was the first formal speaker and he proved his mettle by being joyously informal. It was a real smoker talk, humorous, friendly, sincere. It brought their president very close to the students, and it was hard for many to believe that the smiling, jolly man before them was actually "Prexie" of whom they had an honest traditional fear because he was "Prexie." That night Dr. MacLaurin became an actuality to most of the students, and they liked his smile, his quick movements back and forth, and his sincere admiration for activities.

Dean Burton was just Dean Burton, and that is all the students ask. In his friendly, straightforward fashion he told them of the Institute traditions, the things that had been done in the past, things he hoped would be done in the future. Most of all, he impressed upon his audience the need for student government for students, which demanded above all things self-control.

We are sorry that we can say nothing about Mr. Henry A. Morss, '93, and his speech, because through some error he was not called on until after the regular program was completed, and the din of students scrambling after "sinkers" and cider was so great that we could not hear a word he said. According to the news story in the "Tech," which was written and printed before the smoker took place, "he related the history of the Walker Memorial from the time that alumni of the Institute were called upon for funds for the construction of the edifice and so enthusiastically responded, through the period when the building after completion was turned over to the government and quartered the Naval Aviation Detachment, to the present time when the building is to be used for its original purpose, etc." We have a feeling that the "Tech" correspondent was more interested in composing a smothering sentence than in telling what Mr. Morss was going to say the next day, because whereas we could not hear Mr. Morss we could hear the continuous laughter of

those that did and we doubt very much if he gave a dry biography of the Walker Memorial.

There was entertainment a-plenty. The Glee Club sang twice, once in key and once out of it, which gave a pleasing variety. The Banjo Club jazzed their jazziest; John Philbrick did a black-face stunt; Laurence Conant "did" Harry Lauder; Walter Frazier sang once more his perennially funny vampire song from "Not a Chance"; C. L. Eksergian played the 'cello;—but why go on? The tale is endless. We couldn't possibly describe it all, the color of the class banners, the shouts and the laughter and the singing, the pleasant acrid smell of the blue smoke wreathing slowly to the ceiling, the stunts, the speeches.

Besides, it wasn't only the things that we have described and failed to describe that made it a "big night"; it was something far deeper. It was the silent realization that the war at last was over, that lives were to be lived again and that in the living of the lives of those at the Institute the Walker Memorial was at last to play its part; that activities were no longer wandering tribes in strange lands; that the Institute at last belonged to the students themselves; that somehow it was no longer just a mere educational factory. After three years of waiting the real dedication of the new buildings took place, and when at last "The Stein Song" was sung, every one went home very happy and a little sad because all unknown out of the spirit of the evening a new Institute had been born, very proud as it looked at the past, very brave as it faced the future.

PERCY MARKS,
Department of English.

TECHNOLOGY HAS NEVER HAD A RHODES SCHOLAR

Now is the time to get one—no qualifying exams.

DETAILS of the plan for the resumption of the election of Rhodes scholars in the United States are announced by Prof. Frank Aydelotte of the Massachusetts Institute of Technology, American secretary of the Rhodes trustees. Qualifying examinations no longer will be required.

A statement authorized by the trustees in London reads:

The election of Rhodes scholars throughout the United States will be resumed during the present year. The postponed scholarships due to the various States for 1918 and 1919 will be filled next autumn. Scholars elected for 1918 will come into residence as far as possible in January, 1920, and will enter respectively in January and October, 1921.

It has been decided that the qualifying examination hitherto required of all candidates shall no longer be held, and scholars will be elected on the basis of their collegiate or university record, supplemented if necessary by any further tests that the committee of selection may in their discretion impose. Other conditions of eligibility will remain as before.

There will be elections in all States.

Write to Professor Aydelotte and find out about it!

THE MEMORIAL — A RESUME

By JOHN RITCHIE, JR.

TECHNOLOGY's long-desired social center became a fact this January when the Walker Memorial was dedicated. This building bears the name of the second president of the Institute, Francis Amasa Walker, "soldier, educator, economist," one of whose wishes during his later life was to provide for the social needs of the student body.

While General Walker was president of Technology, there were problems of very serious nature along financial lines, and to his regret he was obliged to spend his time with them and at his death the question of the social side of the Institute was yet unsettled. His wish was known to others, however, and shortly after his going a movement was set on foot towards a fulfillment of his ideas. Funds were collected and by 1901, four years after his death, there was available the sum of more than \$100,000 for the purpose. The energetic alumni committeemen had actually in hand at that time the plans of a building to be erected near the Boylston street structures, on the site that afterwards was utilized for the engineering departments.

Something, no one now knows just what it was, delayed the execution of this plan, and shortly afterwards the Institute erected at this place the engineering buildings which have but recently been removed. Meanwhile the spirit that called for the erection of the Walker Memorial continued active, and other funds were secured. When it was definitely decided that the Institute would move to Cambridge, plans for the structure were made, one committee placing it at the corner of Massachusetts Avenue and Riverway.

The fund grew larger, until four or five hundred thousand dollars were finally available. Building was delayed, however, until the educational plant should be completed.

While the construction of the educational plant was under way, plans were matured for the building of the Walker Memorial, and the laying of its corner stone was one of the features of dedication week with its ceremonies, reunions, pageant and display. It was ready for occupancy by Labor Day a year later, the Institute meanwhile conducting its restaurant in one of the spacious basements of the building devoted to general studies, and affording what it could of rest and recreation rooms of temporary character.

Meanwhile war had been declared. For a portion of its share Technology undertook the special education in mechanics and other branches of great government schools, which at their maximum numbered a couple of thousand soldiers and sailors, and in addition, as a convenience to the authorities, furnished board and lodging. At the critical moment when the demands of the regular students were made for the drafting rooms which had been during the summer the dormitories of naval aviators, the Walker Memorial was finished. It would help solve an important difficulty, so alumni and students, with the Memorial really theirs, the dream of a decade come true, deemed it a patriotic duty to turn it over to the uses of the naval aviators. These have just gone, so that it is with enthusiasm that Tech men enter into the possession of their social center.

The Walker Memorial was erected by the Institute at a cost of about \$600,000. He who enters through the portico finds himself in a spacious lobby with rooms on

either hand and the doors of the great dining hall before him. The rooms at the side will be used for general club purposes, one of them being the library and reading room. They are so arranged that with the foyer they will constitute a great reception hall. The dining room occupies the entire center of the building. It is flanked by terraces upon which meals may be served a la summer garden, while at the back is the cafeteria employed in the daily furnishing of meals to students. This has been an important work during the occupancy of the building by the Naval Aviation Detachment, for Mrs. Scripture, the manager, has a record of nearly a million and a half meals since the building has been the home of the aviators.

The great hall is furnished with balconies for spectators at the social events, it has a fireproof movie booth, with projecting lanterns and cinematoscope, while the screen, usually ensconced in the capping of the pillared mantelpiece, moves automatically down when desired. The room is severely plain, its decorations being in cool gray picked out with cardinal, the Institute colors. On the second floor are other rooms in the front of the building for social purposes, the long galleries to the main hall, and to the west the administration offices, a long dining hall and a cosy grill. A vast gymnasium occupies the space above the hall, while the offices of various activities find their homes in convenient rooms along the river front. Here, are the offices of the musical clubs, of the Tech Show, of "Technique," the "Voodoo" and the "Tech," the latter having a spacious city room and editorial quarters in the basement. The basement, which is mostly above ground, contains shower baths, storage, an excellent four-track bowling alley and a good indoor rifle range.

AS IT WAS IN THE BEGINNING

Old days of the rush recalled by present Freshman Class

MEMBERS of the sophomore and junior classes, to the number of fifteen hundred at the Massachusetts Institute of Technology fought for several hours on Saturday morning, January 25, despite the efforts of Dean Burton and three Cambridge policemen to quell the disturbance, the freshmen finally winning.

The battle was over the flying of freshmen class flags from the tall poles on Lowell and Du Pont Courts, which the sophomores saw aloft when they arrived yesterday. In revenge they tied Sidney Biddell of Boston, president of the freshman class, to the pole on Du Pont Court because he refused to climb it and take down the flag there. An enterprising sophomore climbed the pole and threw the flag to the ground, where it was torn to ribbons. About twenty-five freshmen were run down and trussed with cords.

About ten o'clock a big group of freshmen appeared and gave battle. They fought hard but were subdued and a sophomore class flag was run up. Then Dean Burton appeared and tried to restore order, but the defeated freshmen came back with heavy reinforcements and renewed the battle. Clothing was torn and many bloody noses and black eyes appeared as if by magic. Three policemen appeared but they could not stop the rioting.

Finally the freshmen drove off the sophomores and Jack Heffernan of Seattle climbed the pole, tore down the '21 flag and hoisted anew the colors of '22.

THE JANUARY COUNCIL MEETING

THE sixty-seventh meeting of the Alumni Council held as usual at the Engineers' Club, on January 27, was notable partly for a very good attendance and partly because of an unusually live and informative discussion, in which nearly everybody took part, concerning the story told by President Maclaurin, Dr. Dewey and Professor Pearson about the faculty reconstruction committee's work in the direction of fixing more definitely the relation between professional work and the so-called general, or liberal and cultural studies. The consensus of opinion, as given by most of the alumni present, some of them prominent in Institute work, was that what the Institute needed was not a smaller amount of liberal study but a greater.

Another decision of interest was the vote by which the alumni hope to co-operate with the Corporation in the provision of a suitable memorial for the Technology honored dead, a memorial, whether a building or an endowment, which should last forever and supplement the permanent record of the Institute's part in the war which must some day soon be compiled.

Capt. Grosvenor D'W. Marcy, '05, was the salad orator and spoke of work in his branch of the service during the war.

The meeting was called to order at 7.45 by President Morss, with an attendance of forty-three. Among the guests were Dr. R. C. Maclaurin, Prof. W. H. Lawrence, Prof. D. R. Dewey, Prof. H. G. Pearson, Prof. R. E. Rogers, Dean A. E. Burton, Dr. S. J. Mixter, Mr. A. F. Bemis, Mr. F. L. Locke, and Mr. H. S. Ford.

The business on the call for the meeting was: What is the alumni point of view in regard to general studies at the Institute?

The president made announcements and called the attention of the Council to plans for the annual dinner, which will be held on March 1. He announced that A. Blakely Smith of '93 had recently been appointed business manager of the American University Union in Paris and that he takes the position first held by Mr. Lansingh. He also announced the election of fifty-five associate members, of the classes of '18 and '19 chiefly.

The president then spoke of the conference which had been held with representatives of student activities and of the renewal of student activities at the Institute. He spoke of the smoker held in the Walker Memorial, at which sixteen hundred students were present and called the attention of the alumni to the fact that one thousand of them were men who had never been at Tech till this year, so that they were not at that time familiar with the Technology traditions. He told of the informal charter which was presented by the president of the Alumni Association to the students and stated that the Dean requests that such a ceremony be held each year in order to let the students know of the alumni interest in the welfare and maintenance of the Walker Memorial.

After a discussion in which it was noted that there had been some class rivalry at the Institute in which there were conditions not endorsed by the alumni, it was

VOTED: That it is the sense of the Council that the Advisory Council on athletics should arrange for a field day to be held this spring.

Dr. Tyler made a report as to the joint meeting of the Executive Committee and Massachusetts Institute of Technology Committee on National Service in regard to continuance of war work and of the work of the Women's Auxiliary in the Rogers Building. It was

VOTED: That the report presented be accepted, indicating that the joint committees believe it well to continue the collection of funds for the maintenance of the Technology Bureau throughout the remainder of the calendar year and that the work of the Women's Auxiliary, so far as the Institute is concerned should, and it is so planned, gradually come to an end sometime in April.

Mr. Lansingh stated that the lease of the Royal Palace Hotel by the American University Union, of which the Technology Bureau is a part, had been extended until October.

The secretary read letters from the editor of the TECHNOLOGY REVIEW in which it was suggested that class secretaries be requested to gather information concerning the activities of members in their own class, forming a foundation for the later reports which should be made of the Technology service in the war.

President Morss next called upon President Maclaurin, who spoke to the Council on the Permanent Records of Technology Men in the War, remarking that their services were very notable and worthy of the cause. President Maclaurin suggested that serious consideration should be given to the plan for a permanent memorial of the mighty dead. He suggested that we should avoid using the energy on things ephemeral, and that the memory of our men should be crystallized in a permanent memorial. He believed that the alumni should consider a worthy memorial to commemorate the priceless contribution of those who fell, one which should be appropriate and not necessarily costly.

Upon motion duly made and seconded, it was

VOTED: That the president appoint a committee to consider the larger problem of a permanent memorial of Technology men in the war.

Upon motion duly made and seconded, it was

VOTED: That the president appoint a committee to take up the matter of preparing a war record of Technology and its alumni.

President Maclaurin next spoke to the Council on the question of reconstruction and stated that the faculty had had this problem in mind even before the war, but that now the war has given it added interest. He stated that faculty members are open minded and are deciding problems on their merit. The discussion centers now upon the proper balance of different types of study. There are, as always, two types of opinions as regards the value of science and literature. There are two ways of looking at the Institute, first as a professional school which extremists suggest should give up all general studies, and second, because of its being a scientific school the non-scientific subjects should be given special prominence. Along this latter line the so-called humanistic subjects, it was suggested, should be emphasized to a greater extent. Dr. Maclaurin suggested that these questions would be settled within the next few weeks. He suggested that the antipathy toward the humanistic subjects should be outgrown and that really the broadness of man's life is the larger problem rather than whether it is scientific or literary. The breadth of life is of vital importance to a real man. He told the Council that he hadn't come to express his views on the problem but to ask the views of the alumni.

Dr. Dewey was then called upon as the head of one of the general departments and he told the Council that he had not come to the Council to preach the expansion or the emphasizing of the particular subjects which he taught. He came to Technology from a college of general studies, but he had been converted to the Technology system and that he often regretted that he had not had the advantages of the Technology training and its discipline. He told the Council how the subjects in Economics had developed during the past twenty years and how, when he came to the Institute, it could be assumed that many students had a general knowledge of commercial

processes, but that now it might be assumed that even members of the Council were not familiar with the current practices of some of the banking systems. He also told how previously it might be expected that one of a large class might speak from a socialistic point of view but that now a larger number spoke from that point of view and even from the point of view of Bolshevism. He told how the students desired to have broader training on cost accounting and analysis of accounts, and that they craved a greater knowledge of the handling of men and a knowledge of the labor problem. Continuing his discussion, he told the Council that he felt the need of advice from alumni who are engaged in the practical problems of business.

Following this discussion, the president called upon Professor Pearson, head of the department of English and History, who spoke to the Council on the training of students in general topics, and what the whole English department was trying to accomplish. He said that during the past term there were 1400 students taking English and that the problem of control in itself is complex. A problem of the department is to teach the students to get the most out of the printed page and the returns at present seem rather meager. Work has been helped during the past term by the use of the "History of the Last Fifty Years in Europe" as a topic. By trying to bring out an expression of opinion from the students, the classes have thoroughly waked up. Each member in the class is appointed one topic which he has to write up and speak upon for eight minutes. The department is trying to emphasize to the students the truth of Professor Swain's statement, "What a man can't explain, he doesn't know." Another problem of the department is to do what it can to help the students along in their professional writings, such as the writing of letters, business correspondence and the preparation of reports. They are trying to teach the fundamental principles of making a clear and orderly report. Professor Pearson further described a history course which was planned for the second-year students, in which interesting problems of English History could be discussed to great advantage. For all this work, Professor Pearson emphasized the need of properly organized general studies through three years of the Institute's course.

Following Professor Pearson's discussion, the meeting was thrown open to a general discussion, in which nearly every one contributed something valuable.

Mr. Bemis stated that he thought that something is lacking in an education that makes Technology men too much like machines.

Mr. Hart said that while it is not true that a man cannot build a good bridge because he does not know about romance languages, yet there is a need for such knowledge, and the opportunity to serve and to meet with people is certainly improved by the general knowledge of an engineer.

Mr. Lansingh remarked that his particular problem is to find the proper place for his son who is about to enter college, and that although he wants him to be a business engineer he realizes that much emphasis must be put upon broadening studies, and he is determined to choose some place where about a quarter of his son's time can be put on to general studies.

Mr. Monroe called the Council's attention to the fact that representative Technology men have filled places of great responsibility. Furthermore, the problem of technical training in President Rogers' time was simple, but now on account of the great changes in conditions the problem is more complex. The fundamental problem at this moment is to provide for real men to teach men and that the Institute will have to offer enough to attract them. So swift have been the changes that men of value five years ago would not amount to so much at this time.

Mr. Bowditch believed that there should be greater co-operation with the industries. Professor Richards reviewed his experiences and change of ideas during the

past forty years. He spoke of the experiences of non-educated men and suggested that they get their power through induction.

Mr. Hopkins spoke of the work in factory management and that a new time has come where machines are installed to do away with hand labor and that this is emphasized more on account of the present condition of labor. He spoke of his experience in picking Technology men to assist him on his staff and those whom he had chosen seemed to a greater extent to be non-graduates rather than graduates. Mr. Packard, too, spoke of the experience he has had with Technology men as being well prepared to undertake new problems.

Mr. Metcalf spoke of the great need of having Technology men trained to meet men well and to make good report by voice or in writing. It seemed to him that our men have, in general, lacked this training. He suggested that our students should be given a breadth of view and an interest in their subjects and that they should be turned out while they are still young and enthusiastic.

Mr. Everett Morss emphasized the point that men should realize that the training of engineers merely is not training men to do work with their hands, and Professor Spofford suggested that the big problem of the Institute was to turn out a good engineer, and turning out a good man to act behind the engineer, and that the professional department should give inspiration for the general studies.

And the adjournment, at nearly eleven o'clock, found the Council broken up into little knots of men still comparing experiences and arguing about what is, after all, the chief problem that Technology has to face.

A NEW KIND OF TEACHING JOB

The sort of course we need at Technology, too

ERWIN H. SCHELL, '12, assistant professor of Economics at Massachusetts Institute of Technology will, besides his regular work, be one of the faculty of the new School for Social Research recently opened in New York under the auspices of well known liberal and radical economists, historians and sociologists.

Anthropology, psychology, political economy, finance, statistics, jurisprudence, sociology and similar topics will be taught, not to impart "merely cultural information," but to develop a practical application of these subjects in an understanding of the great questions which are arising out of the readjustment period following the war.

The school will not be so radical as the Socialists nor so conservative as the established universities. It will be undogmatic in all its teachings. It will approach no subject with preconceived opinions.

A group of instructors has been selected who recognize the pressing necessity of collecting accurate information about political, social and industrial conditions and who are capable of bringing our ever increasing knowledge of natural science, history, psychology and anthropology to bear on the task of social and economic readjustment.

The school will turn out a new class of leaders. It ought to turn out a new kind of aspirant to political office, who will be clever enough to gain his constituents' support by fair means and represent their real interests, not those of his party machine.

EDITORIAL

WHAT shall be Technology's Memorial to her undergraduates and graduates who fell, whether in action or in other, no less useful service, in the Great War?

Other colleges and universities are thinking already of suitable buildings or institutions; the Institute will not want to lag behind. We shall have, of course, our records and histories, both class by class and for the school as a whole, as a living organism, but, as President Maclaurin has said, a history is not the most vivid form of memorial. Already the Alumni Council has appointed a committee to co-operate with the Corporation concerning these things; the compilation of Massachusetts Institute of Technology war records is only a question of time, but the form which the permanent Memorial is to take has hardly begun to occupy people's minds.

We are glad to present the question, therefore, to the body of the elder brethren. THE REVIEW would like letters and suggestions.

What form shall Technology's War Memorial take?

We have as yet heard no suggestion from President or Corporation. Perhaps they feel it only fitting that the Alumni first express their opinion. Neither has the undergraduate body, which will surely wish to add its tribute, given thought to the matter. The suggestions at present are two:

One is that the Memorial shall embody the spirit of youth, that as the men who died were young men, it is their youth which should be commemorated. It was planned that some day there shall be a statue in the center of the Great Court, one typifying Technology, like that of John Harvard, or the Alma Mater at Columbia. Why not, says Dean Burton, erect for the spirit of Tech not any academic figure, nor strong, fostering mother, but a replica of the David of Michelangelo, of which none exists in this country, that lean, eager, angry figure standing over the fallen Goliath. That would be the real spirit of Technology in this war.

No, says a prominent alumnus; this war was international in its scope and result. The lesson of the peace will be to bind America irrevocably to the other nations of the world. Her day of isolation is past. Now Technology is an international institution. Hardly a country but is represented here; the number of foreign students grows greater every year. The best memorial to the young men who died in this war would be something to foster the international spirit at the Institute, to make it more important, "that these dead shall not have died in vain."

A continuing institution is a better memorial than any building. Why not a fund for increasing Tech's relation with foreign lands, exchange professorships perhaps, exchange scholarships, fellowships for foreign students of high rank, an increase in dignified publicity of Technology aims and methods abroad, more opportunity for American boys here to study foreign opportunities in their profession. And perhaps, if some concrete memorial seem advisable, a building which shall express these things and which shall house, also, the social life of the foreign students who only too often have to live lonely in an unsympathetic land.

Here are two suggestions. What others are offered? Will the alumni express themselves? Statues? Memorial halls? Educational expansion? Fellowships? A "Soldiers' " field for athletics? Gold-lettered tablets? Portrait collections? Scholarship funds? All these are possible, none is unfitting.

How shall Technology best honor her young dead that do her such honor?

R. E. R.

THE WAR SERVICE AUXILIARY SUMMARY

Distributed to those present at the Alumni Dinner—but good reading for all

BOSTON, February 21, 1919.

JAMES W. ROLLINS, Chairman,

M. I. T. Committee for National Service.

My dear Mr. Rollins:

As the Auxiliary derives its authority from the Alumni Council through your committee, this seems a suitable time to summarize the work of the Auxiliary, so that you may place it before the alumni at their annual dinner on March 1.

In the spring of 1917 the Auxiliary was established to co-operate with your committee by rendering every possible assistance to Technology men engaged in the war and to the families which they had left behind. It was at first thought that occasional letters or a bit of advice here or there would meet these needs, but the Institute men entered the war in great numbers, and government schools were established at the Institute, so that there was an unexpected expansion of our work and it soon absorbed all the time of many people.

As the backbone of the work of the Auxiliary, a catalogue of men in service was assembled. Today this catalogue carries 2770 names of Massachusetts Institute of Technology men in service. An analysis of these names yields the following results: Army, 2221 (465 Engineers, 311 Aviation, 247 Ordnance, 244 Coast Artillery, 241 Infantry, 196 Artillery, 100 Chemical Warfare Service, 75 Sanitary Corps, 62 Quartermaster's Corps, 60 Medical Corps, 43 Signal Corps, 35 in other branches of army service); navy, 549 (149 in aviation, 23 in Marine Corps); deaths 101; citations 46; men known to have gone overseas 1097, Ambulance, Red Cross, Young Men's Christian Association (A. E. F.) 74; commissioned officers 1944 or 70 per cent of all men in service; 1558 alumni hold commissions (of these 1079 are graduates of Massachusetts Institute of Technology) 354 undergraduates are commissioned officers.

Of the 1568 men holding commissions in the army there are 469 2d lieutenants, 520 1st lieutenants, 406 captains, 124 majors, 32 lieutenant-colonels, 12 colonels, 3 brigadier-generals, 2 major-generals. Of the 344 men in the navy holding commissions there are 185 ensigns, 53 lieutenants (j.g.), 48 lieutenants, 34 lieutenant-commanders, 20 commanders, and 4 captains.

By exchange with the Technology Bureau in Paris and the Alumni Office, this list is kept up to date and is in constant use by class secretaries, fraternities, department heads, and others to locate special groups of men in service.

From our office correspondence has been carried on with these men and with their families, and a fund of information has thus been assembled which has proved of great value in many emergencies.

No body of statistics can reveal the more subtle work with the men, but a lieutenant of artillery wrote a letter which showed that the men met the Auxiliary more than half way: "As a football team goes into the game with renewed vigor when cheered on by its supporters on the sidelines, so do our boys go over to France determined to win, for they know that the people at home are backing them to the limit."

A lieutenant of light railways writes since the armistice: "With what you folks at home have done for us along with the Tech Bureau over here, I have yet to meet a Tech man who does not feel that he belongs to the best college there is."

Just before he was killed Dinsmore Ely wrote from France: "One does not appreciate what Massachusetts Institute of Technology really stands for until he has left it and finds the spirit of Technology following him." It was to interpret this spirit of Technology that the Auxiliary put forth its efforts; therefore, to those who were for a time stationed in the government schools at the Institute, the care and hospitality of the Auxiliary were also extended. A special fund was created by the gifts of Augustus Hemenway, Esq., Mrs. Richard W. Seais, Mr. and Mrs. Henry F. Bigelow and Mrs. Oliver Ames, and this was used in the work with these men. A Boston Club Room was opened, Sunday teas were provided, and, at the request of the naval authorities, the hostess work at the Recreation Building of the Naval Aviation Detachment was maintained.

From January to November, 1918, 367 men from the government schools were visited in twenty-two different hospitals, with a total of 2709 visits made by accredited visitors. A patient at the Naval Hospital wrote: "We have often said that you looked after the navy pilots at Tech better than any other group of boys in the service was looked after."

These figures do not include the emergency demand made by the influenza. At that time convalescent homes were opened by Mrs. Cunningham at Westwood, by Mrs. Arthur T. Bradlee and her associates at Chestnut Hill, by Mr. and Mrs. Henry F. Bigelow at Lancaster, and by Augustus Hemenway, Esq., at Milton. Here convalescent care, with most careful nursing supervision, was provided for a total of 1399 days. Special contributions of more than \$4000 made possible this work with the convalescents and the providing of extra nursing at a time when such care and nursing were very large factors in the recovery of patients.

Through the generosity of Mr. A. F. Bemis ('93) it was possible to respond to Colonel Cole's request that the Auxiliary take over the furnishing of nurses and special supplies to the Student Army Training Corps Hospital. From October 31 to December 23 a total of 151 patients was admitted to this hospital, and the application of Mr. Bemis's gift made a notable change in the welfare of these men. \$2000 was available for this work, of which \$1530.03 was expended.

During the few weeks when the S. A. T. C. and the S. N. T. C. were mobilized at the Institute, Mrs. Henry P. Talbot and her committee extended the hospitality of the Institute to 284 members of these corps, who used the Emma Rogers Room as a meeting place with families and friends.

Before the great organizations which now distribute reading matter were in operation our Bookroom Committee distributed to the Institute men in camps here or on service overseas more than 5000 volumes of books of current interest, and there have been mailed to individuals between October, 1917, and February, 1919, over 1600 parcels of magazines and newspapers. We know that most of these reached their destination.

One who was most intimately associated with great numbers of Institute men on duty overseas writes: "I wish I could convey to you an idea of the value of the work which your Auxiliary has done for the men abroad. While the material aid accomplished was great, I feel sure it was exceeded by its moral value. It was the thought, first, that the women we left behind us were really backing us up, and second, that the Tech women were taking the lead over all other colleges in America. I want to take this opportunity of registering my appreciation of the magnificent work done by you all."

The workroom, which early in the history of the Auxiliary became a most important factor in meeting the needs of our men, presents a separate report at this time. It may be of interest, however, for you to have the following summarized statement of moneys received and expended through the Auxiliary and workroom.

Summary of receipts and expenditures from July 23, 1917, to February 1, 1919:

M. I. T. WAR SERVICE AUXILIARY

Dr.		Cr.	
Alumni Council	\$18,500.00	Paid to Treasurer Technology	
Special Contributions	5,141.37	Workroom	\$12,650.00
Hemenway Emergency Fund	2,115.00	Paid to Treasurer Workroom	
Bemis Hospital Fund	1,530.03	—designated use	625.00
		Paid from Bemis Hospital Fund	1,530.03
		Paid from Hemenway Fund	1,636.10
		Paid for printing, postage,	
		office furniture, telegrams,	
		cables, clerical assistance—	
		19 months	6,143.29
		Balance on hand—general	
		fund—February 1	4,223.08
		Balance on hand—Hemenway	
		Fund—February 1	478.90
	<u>\$27,286.40</u>		<u>\$27,286.40</u>

TECHNOLOGY WORKROOM

Dr.		Cr.	
War Service Auxiliary	\$12,650.00	Supplies and overhead ex-	
Other Sources	14,156.80	penses to date	\$26,055.30
		Balance on hand February 1	751.50
	<u>\$26,806.80</u>		<u>\$26,806.80</u>

SUMMARY OF SOURCES OF INCOME, AUXILIARY AND WORKROOM

Alumni Council	\$18,500.00		
Other sources:			
Auxiliary	*\$8,786.40		
Workroom	14,156.80	22,943.20	
		<u>\$41,443.20</u>	Total amount received by Auxiliary and Workroom.

NOTE.—Certain figures in this report are corrected to the date of going to press, April 1.—EDITOR.

It has been a high privilege to attempt to interpret the will of your committee in re-enforcing the splendid work of the men of the Massachusetts Institute of Technology, who have borne so noble a part in the war. If our efforts have been in any measure successful, it is largely due to the generous aid of the many friends of Technology who did a part of their war work through the Auxiliary, and to the unflinching cordial support of your committee.

Very truly yours,

ALICE N. GEORGE (Mrs. A. J. George),
Executive Secretary.

*This does not include the sum of \$4,000 and upward which was expended by individuals for work with convalescents at the time of the influenza epidemic.

ADDITIONS TO THE ROLL OF HONOR

February 4 — March 20

- FELLOWS, RAYMOND H., '09, July 17, 1918. Private, Company F, 101st Engineers, 26th Division. Killed at Chateau Thierry.
- MALCOLM, RALPH R., '15, March 9, 1919. Sergeant, F Battalion, 105th Field Artillery. Died on way from France on steamship "American."
- PATTEN, HAROLD K., '15, September, 1918. Died in the Naval Hospital, Pelham Bay, N. Y.
- SMITH, CHARLES McLEAN, '10, September, 1918. Died of wounds received in action.
- SOMMER, HENRY OSCAR, '15, September 29, 1919. 1st Lieutenant Machine Gun Company, 54th Battalion, 108th Infantry. Killed at St. Quentin.
- THYNG, ELMER FORREST, '15. 2d Lieutenant, Company G, 1st Corps Headquarters. Deceased.
- TYLER, JOHN C., '17, September 18, 1918. Shot down by the enemy.
- MACKEY, GEORGE LEWIS, '14, April 17, 1918. Killed in action.
- TAYLOR, ERMOND A., '20, February 19, 1919. Killed at Miami, Fla., when the seaplane which he was piloting plunged into the bay.

ADDITIONS TO THE CITED LIST

February 4 — March 20

- BAGBY, RALPH B., '16, 2d Lieutenant. Has been decorated with the Croix de Guerre and the Distinguished Service Cross.
- BAKER, DOUGLAS B., '15, Captain. Awarded the Distinguished Service Cross for extraordinary heroism in action near Bois de Beuge and Bois de la Pultiere, October 9-15, 1918.
- CHAMBERLAIN, S. V., '18, Private. Decorated with the Croix de Guerre on December 25, 1918 for devotion and courage in evacuating wounded from advanced postes de secours, July 15-17, 1918.
- CARR, DAVID, Instructor, Department of English. Has been decorated by the French with the Croix de Guerre and the silver star.
- DICKINSON, DWIGHT, JR., '08, Lieutenant. Awarded the Distinguished Service Cross, January 3, 1919, and the Croix de Guerre for engagement at Mont Blanc, Champagne.
- OHNUKI, T. RIOJO, '09, Captain, Japanese Navy. Has been decorated by the Emperor and the King of Italy.
- SAUL, TOM W., '10, 1st Lieutenant. Awarded D. S. C. for extraordinary heroism in action near the Bois de Lemieres, France, September 12, 1918.

Additions and corrections should be sent to Mrs. A. V. George, 491 Boylston Street, Boston, Mass., M. I. T. War Service Auxiliary.

SIXTY-SEVEN PER CENT OFFICERS

M. I. T. War Service Auxiliary Statistics — February 8, 1919

Men in service	2725
American Expeditionary Forces	991
Foreign Service	76
Aviation	459
Navy	529
Officers	1834
Ambulance, Red Cross, Young Men's Christian Association (A. E. F.)	71
Lieutenant-Colonel or higher	43
Cited	43
Deaths	97

It is interesting to note that with 2725 men in service and 1834 officers, we find 69 per cent of the M. I. T. men are commissioned officers. Harvard reports 47 per cent.

A CORRECTION IN THE HONOR ROLL

Concerning E. S. Couch, '17

IN the March Honor Roll, furnished to the REVIEW by the War Service Auxiliary, the item about Edward S. Couch, '17, should read:

2d Lieut., P Co., 1st Bn., 22d Inf. Death by accident, February 6, 1918, at Fort Leavenworth, Kansas.

POPULAR INSTRUCTOR DECORATED

DAVID CARB, formerly instructor in the Department of English from 1909-1915 when he left to enter the ambulance service, is now an officer in the French Artillery and has been decorated for his services with the Croix de Guerre and the silver star.

DAY OF WRATH

Prof. Leonard M. Passano

I

I have fallen on evil days, on the days of fire and the sword,
When the Spirit has gone his ways and Jehovah is God the Lord;
When the Holy Spirit returns to the mouth of God who gave,
And the crucified Saviour learns to lie in unrisen grave,
I am dead; my glorious birth is a mock in the mouths of men,
When for one who cries, "Peace on earth," the criers of war are ten.
What profit to die and suffer? What profit to rise and save
If man refuse my offer and the old gods spring from my grave?
They arise from my grave and pass to my kingdom on earth. It is well!
I yield them my place, but, alas! They rose to my grave from Hell,
With the fire of Hell in their left hand, the hatred of Hell in their right—
My kingdom of peace is bereft and my children are lost in the night.
With the murder of Hell in their heart and the craft of Hell in their brain—
My children are scattered apart, and my kingdom of peace is pain.

II

A king arose in the East, taking my name in vain;
A king, with the mark of the beast, of a race with the mark of Cain,
Fulfilled of cunning and guile, faithless, cruel with hate,
And ravened for a while, lusting for my estate;
Pillaged, ravished and burned, tortured, betrayed and killed;
My priests and shepherds spurned, the blood of my little ones spilled.
The little ones that I cherish are trodden to earth and die;
But the murderer shall perish and render an eye for an eye.
He shouted my name in vain. Ere the echo returns to his ears
For a handful of earthly gain he has deluged the world with tears;
For a handful of earthly lust fills the world with fire and flame,
Casts my temple in the dust, and doeth it in my name.

III

For the babe whom the mother suckles, for the woman who travaileth,
His hand the sword belt buckles and the woof unraveleth.
His hand unsheaths the sword, cuts the warp and shatters the loom
Whereon, with the help of the Lord, through ages of toil and doom
Man, woman and child have striven, in the sweat of a little life,
To weave, whether driving or driven, a garment unmarred by strife;
A garment of peace, whereunder their naked spirit, enfleeced,
Shall not cry aloud and blunder in the nakedness of the beast.
The garment is reft, and woe to the hand by which it is riven!
I have spoken it, as ye know, "Offense to my little ones given,
To the least of my little ones, tender, and helpless, and weak, falls on me.
It were better by far the offender were drowned in the depths of the sea."

IV

Your shoulders shall bear the burden. Ye shall bow to the earth and die.
The day of my wrath is your guerdon. Denied, I, too, will deny.
My hymns ye have made the wailing and groans of a world at strife.
My love is unavailing and hate is your law of life.
So, now thou shalt pay, O, king, beaten and seeking peace!
The lash of my whip shall sting and the sting of the welt increase.
And the world shall say: "When he offers his hand in peace and good-will,
Strike, for the hand he proffers is armed, and he means to kill!"
His hand is armed with treason; let your heart be armed with mistrust,
So the victor for a season shall fall and bite the dust.
He took what his heart did covet; took whatever his hand could get.
And war—taught his children to love it, the infant's prattle a threat.
But now the shadow of death hangs over him and his lands.
He shall vanish as a breath, as a footprint on the sands.

V

The king is dethroned and all kings have fallen to low estate.
In this thing, as in all things, the times are growing late;
Too late for the old oppression! Too late for the ancient wrong
Bequeathed, as a sole possession, to the people through ages long!
For the sweat of mankind has watered the earth and a new crop springs
From the soil of nations slaughtered—soil fattened by rotted kings,
By kings and rulers, oppressors; by all who have lived at ease.
For the people, the dispossessors, have spoken: "No more of these!"
"In the sweat of thy brow thou shalt labour, shalt labour and eat thy bread,"
Was said, without fear or favor, of all—of the quick and the dead;
Of the living who bear the burden, and the dead, the burden they bear;
The dead in spirit whose guerdon is sloth and freedom from care.
But the evil days shall quicken, shall quicken the dead, and go;
And out of the world thus stricken a fairer world shall grow—
A world wherein who toils shall have, and who labours not
Shall no longer possess the spoils unrighteously begot.

VI

I have fallen on evil days, on the days of fire and the sword;
But earth shall return to my ways and follow me, Christ the Lord!
The doer of evil is broken, and earth proclaims my praise.
The Holy Spirit has spoken, my Father of endless days.
I have redescended and risen, hand in hand with the sons of men.
We have loosed the bonds of our prison and stand erect again;
Chastened, erect and free. So hatred and war shall cease,
And mankind follow me in goodness of will and peace.

FRANK EVERETT PEABODY, '77

Died September 28, 1918

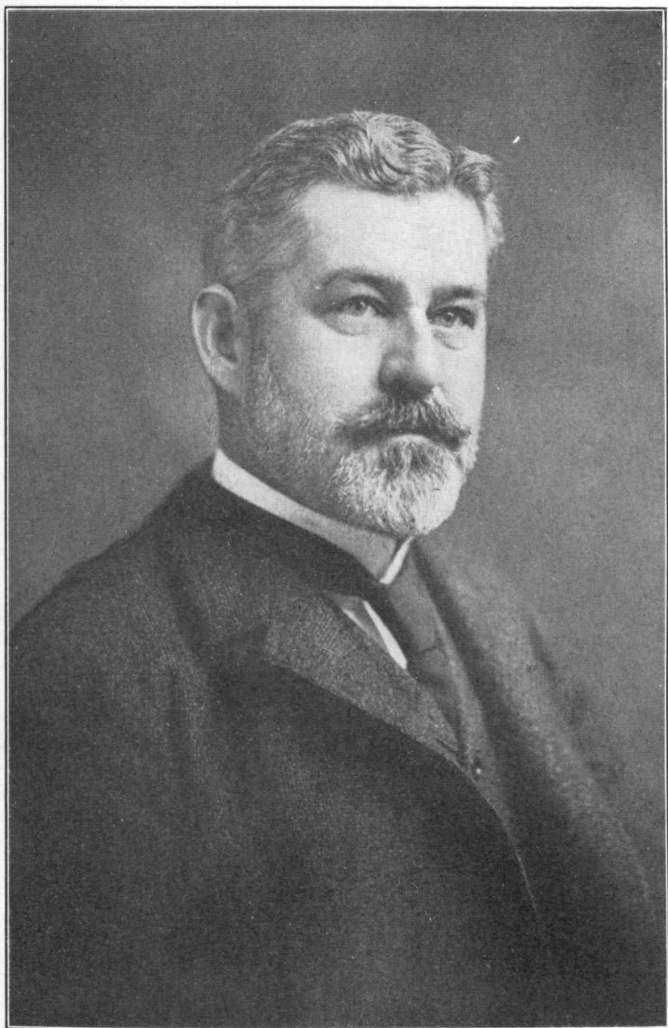
FRANK EVERETT PEABODY was born in Boston, February 29, 1856. His father was Francis H. Peabody, one of the founders of the banking house of Kidder, Peabody & Company, and his mother was Adelaide Kinsley of Canton. His grandfather was the late Rev. William B. D. Peabody of Springfield, who did much to advance the cause of music as a factor in the services of the old-time churches.

Mr. Peabody inherited much of the musical genius of his grandfather and was deeply interested in music. A pipe organ at his residence on Commonwealth Avenue gave him an opportunity to follow his musical tastes and he was a skilful performer. He took an active part on the Music Committee at Kings Chapel and gave the present organ in memory of his son Everett Peabody.

He received his early education in private schools in Boston and later in the English High School from which he entered the Institute in 1873 and was associated with the class of 1877 for two years. At the end of this period he left the Institute to enter the banking business with his father, and which he carried on with great energy and ability up to the time of his death. He formed many friendships at the Institute among his classmates and professors, who recognized his ability and his close attention to his work. Since severing his connection with Tech he has always attended the annual class reunions when possible, and the class members will all miss his genial manners and hearty welcome. His contribution to the Herbert Jacques Fund assisted materially in the liberal amount raised by the class of '77. This fund has been devoted to the establishment of hospital wards in France and England. His loyalty to the Institute was manifested in the generous bequest of \$50,000 to Tech at the time of his death. The spirit of giving was a strong point in his creed, and his contributions for charitable purposes and to individuals needing a helping hand were given in such unostentatious way, that only his nearest friends could realize the extent to which they were carried. The example thus presented may well be followed by all of us to such a degree as we are able to help our fellowmen.

In addition to the banking business he held many responsible positions in the business world. He was a director in the Boston Elevated Railway Company, The Scotia Worsted Mills, and Northern Texas Traction Company. He was a trustee of the New England Conservatory of Music. He was interested in various athletics and belonged to the following clubs: Algonquin, Boston Art, The Country, St. Botolph, Somerset, Union, Exchange, Eastern Yacht, New Riding, Norfolk Hunt, Oakley, Tedesco and Automobile Club. He was interested in golf and was president of the Tedesco Country Club for many years. His summer home was at Marblehead Neck and his winter residence at 120 Commonwealth Avenue.

He was married in 1882 to Miss Gertrude Bayley and had two children, Everett Peabody who died in 1900 and Miss Amelia Peabody, who with her mother survive him. His life of usefulness and good deeds will live forever in the memory of all who came in contact with him and will leave its impress in making a better world.



FRANK EVERETT PEABODY, '77

Died September 28, 1918



Strauss Portrait

CHARLES L. HARRIS, '77
Died February 22, 1919

A COMMANDER OF THE LEGION OF HONOR

Poland, '90, wins yet greater honors as food director for Europe

WILLIAM BABCOCK POLAND, of the class of 1890, has recently been made commander of the Legion of Honor.

Mr. W. B. Poland graduated from Technology in 1890 from Course I, and while a student at the Institute was one of the most active men of his class. Dean Burton tells us that he was a live wire at the Civil Engineering camp, then in the Catskill mountains, and one of the most popular of several men who have since distinguished themselves.

His first position after graduation was with the Baltimore & Ohio Railroad as civil engineer. Here he remained until 1909, when he became vice-president and, contemporaneously chief engineer of the Philippine Railway Company, with his headquarters at Manila. During two years he was a great factor in the development of the road, and at the end of this time accepted the dual responsibility of chief engineer and general manager of the Alaska Central Railway Company. After holding this office for three years, he came to act in the same capacity for J. G. White & Company of New York.

In the latter part of 1915, Mr. Poland associated himself with the Belgium Relief Commission, and subsequently, in the spring of 1916, he went abroad under Mr. Herbert C. Hoover, where he has been on active duty ever since.

The tenth of July, 1917, saw the Cross of Chevalier of the Legion of Honor conferred on Mr. Poland, who was at that time director in Holland of the American Commission for Relief in Belgium. The cross was bestowed in "consideration of the courage with which you denounced before the German authorities and the American Government the deportations made in northern France." At present, Mr. Poland is Food Director for Europe, and was acting in that capacity when this latest and superlative honor, a commission as commander of the Legion of Honor, was accorded him.

A CORRECTION FROM C. T. MAIN

"In the last issue of the Technology REVIEW, January, 1919, there appeared a notice of the appointment of Professor Swain and myself on the Engineering Delegation to visit France. The description of my work was in error and if you desire to have a correct record for any future use, I would suggest that the following change be made, where it reads, 'when he became connected with the Manchester Mills of which he soon became superintendent and engineer. For a time he was also with the Pacific Mills.'

"This should read as follows—'when he became connected with the Manchester Mills and remained there about fifteen months as draftsman. From there he went to the Pacific Mills as engineer, which position he held for about five years, and for six years was superintendent and engineer. Very truly yours,

CHARLES T. MAIN, '76."

FELAND OF THE MARINES A GENERAL

Technology man of '92 — four times decorated for gallantry — was
at Belleau Wood

SECRETARY DANIELS authorizes the following:

Col. Logan Feland, commanding the Fifth Regiment of Marines, now serving as a part of the army of occupation, is made a brigadier-general in the Marine Corps to fill the vacancy caused by the retirement of Brig.-Gen. James E. Mahoney on March 8, who went to the retired list at his own request after forty years of active service.

The promotion of Colonel Feland comes as a result of his exceptional war record, which includes service from the time General Pershing and his staff arrived in Europe until the present. As commander of the Fifth Regiment Marines, Colonel Feland was in action from the time of the bloody fighting in Belleau Wood early last June right up to the final engagements just before the terms of the armistice became effective.

For his gallantry and distinguished services, Colonel Feland has been awarded four decorations: The distinguished service cross and the croix de guerre with the bronze star, gold star and palm. Three times he was cited in French Army and Corps Orders for bravery in the battles of Belleau Wood, during the Soissons drive and in the Champagne sector. He was also cited in American General Orders on July 15, 1918.

When General Pershing sailed for France on May 28, 1917, Lieutenant-Colonel Feland went with him as a member of his staff, in which capacity he served until the arrival of the Fifth Regiment of Marines in France in June, 1917, when he was relieved from staff duty and assigned to this regiment. He fought with the Fifth Marines throughout the war and is its present commander. He was promoted to the rank of colonel on July 1, 1918.

Colonel Feland was awarded the distinguished service cross by the commanding general of the American Expeditionary Forces on July 10, 1918, for gallant conduct in action at Bois de Belleau from June 6 to 14. He was decorated with the French croix de guerre with bronze star July 10, 1918, having been cited in Regimental Orders of the French army for distinguished conduct in action June 6 to 9, 1918. He was cited in General Orders No. 40, Headquarters, Second Division, American Expeditionary Forces, July 5, 1918, and was further cited October 25 in Army Corps Orders by the commander-in-chief of the French armies of the north and northeast, and awarded the croix de guerre with gold star for distinguished service during the action of July 18, 1918. In this engagement his regiment drove the enemy back eleven kilometers and captured 2700 prisoners, twelve cannon, and several hundred machine guns. He was further cited by the French commander-in-chief on October 28, 1918, and awarded the croix de guerre with palm, and in Regimental Orders was cited again on November 15.

General Feland was born in Kentucky in 1869. He served with the Third Kentucky Infantry during the Spanish-American War, and on July 1, 1899, was appointed a first lieutenant in the Marine Corps. He served through all the various grades up to colonel and has seen extensive service, both at home and abroad. General Feland's mother, Mrs. Sarah Feland, lives at Hopkinsville, Ky.—OFFICIAL BULLETIN.

SAFETY AND HYGIENE IN VOCATIONAL WORK

By J. ALBERT ROBINSON, '02

Research Engineer for the Federal Board of Vocational Education

WE ought to know more of what the Federal Vocational Board is doing, not only because one Technology man, James P. Munroe, is one of the chiefs, but because others are working in the rank and file. THE REVIEW would like, since Technology men on the whole write so little, to print the important articles from their pens. We are glad, therefore, to lift this from the December number of the official organ of the Board.

In presenting the reasons why the Federal Board, under the direction of the Research Division, has taken up the question of safety and hygiene, how this work may be made helpful to our vocational schools, and why such work is a vital necessity for the welfare of, and essential to the curriculum for such schools, and other educational institutions that may come within the jurisdiction or influence of the Federal Board, several points of view suggest themselves.

First, the preservation of the life and health of the students and teaching staff, the protection of the property in which such instruction is carried on, and a partial guarantee, at least, of the uninterrupted work for which the schools are created, and to which the students have been intrusted.

A humanitarian interest in the welfare of both teacher and students and a righteous desire to avert injury and disease, pain and suffering, or sorrow and death are sufficient incentives to prompt the consideration of fundamental features of fire prevention, safety and hygiene, as applied to vocational schools. We have in preparation a bulletin of a general nature designed to offer suggestions along these lines.

The following facts offer sufficient evidence for the practical need of giving some consideration to these all important matters.

The aggregate fire loss in schools and colleges has reached \$5,000,000 in a single year, with an average, over a considerable period of time, of one fire per day, and over one hundred distinct large loss fires per year. The rate of burning is increasing rather than diminishing, and the repetition of some of our shameful national tragedies, such as the Collingwood holocaust, and others, await only the right time and the right kind of a day. Let us see to it that a vocational school never lends itself to such an occasion.

One of our authorities on industrial mortality has estimated that the deaths among adult male wage earners, due to accidents, amount to 35,000 a year, and that the non-fatal injuries of industrial occupations cannot be much less than 2,000,000 additional. It has also been estimated that these accidents and accidental deaths produce an economic loss of \$500,000,000 annually. Vocational schools are preparing the industrial workers of the future. Upon these schools rests a great moral obligation to give proper instruction in the fundamentals of safety.

The war has made us newly conscious of the number physically unfit for military service. Under the first selective draft 730,756 men were rejected for physical reasons after examination. This was twenty-nine per cent of the total number actually examined by local boards. Thousands of these could be made fit by proper treatment, or their disabilities would have been avoided had they had instruction in hygiene

principles. The economic loss due to occupational diseases which attack workers on account of the nature of their employment and the unsanitary conditions in which the work is carried on amounts to three-quarters of a billion dollars annually. When we realize the loss of productive powers due to remediable defects and ill health that might easily have been avoided, the importance of this subject becomes apparent, and no time should be lost in giving it consideration.

Besides having a moral obligation to protect the lives and comfort of the students assigned to their care, school authorities have no less an obligation to deliver the goods for which the students have come at a period in their lives of maximum enthusiasm and with a minimum of time at their command. A partial guaranty, at least, is insured by so protecting the property and safeguarding the lives of those within that a continuity of effort may result and the loss of individual time by injury or disease may be avoided.

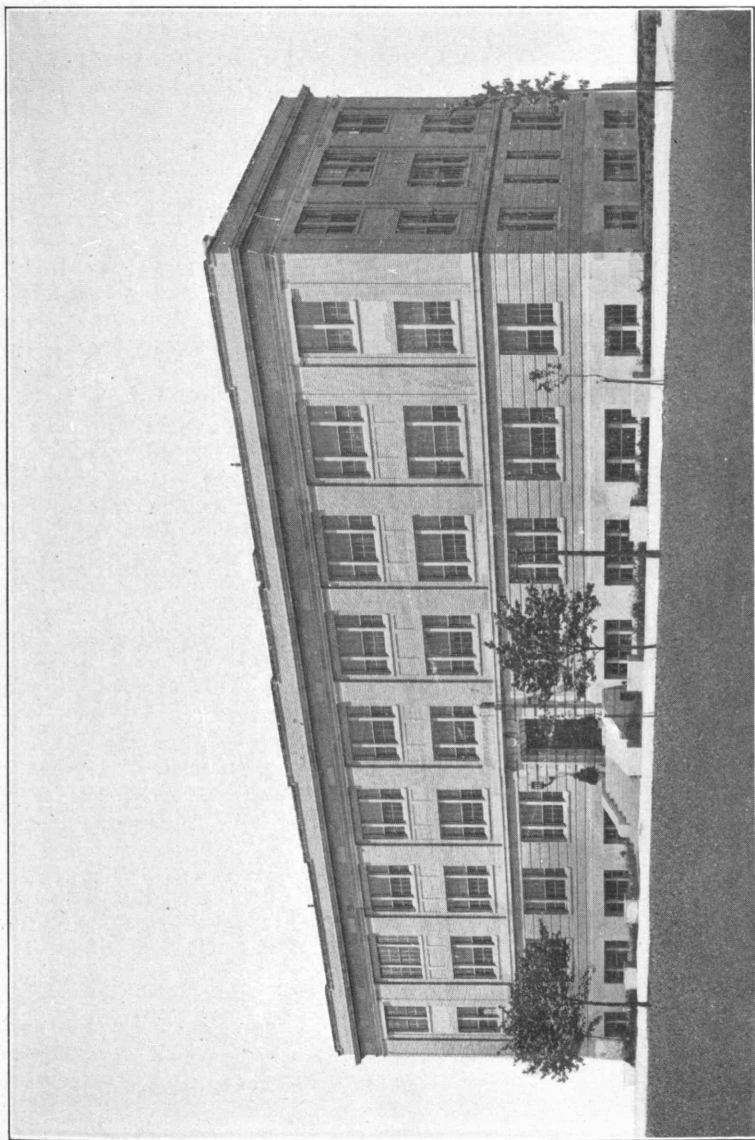
Second, the formulation of outlines for simple, practical courses of instruction in fire and accident prevention, personal hygiene, and prevention of occupational diseases, for use by vocational teachers, and we hope later amplified into actual textbooks for use by the students themselves, both in class instruction and as guides for conduct to be practiced within the confines of the schools during their social and civil life outside, and while pursuing their industrial or business careers to follow. We also hope to suggest and outline more technical studies in the more advanced trade schools, scientific institutions and colleges which will encourage the students to give consideration to the fundamentals of safe machine design, methods of proper building construction, and other considerations which will aim at the elimination of the causes of these hazards.

We believe that the vocational schools, by availing themselves of our work in safety and hygiene, have an unprecedented opportunity to inculcate these fundamental principles at the most fertile source both to safeguard the individual and to so reconstruct his mind and point of view that he will become a valuable disciple among the less informed workmen with whom he will later associate. Furthermore, those who advance to the status of employers will appreciate the needs for the vital things which have been impressed upon their minds and will become real factors in establishing a new era of social betterment.

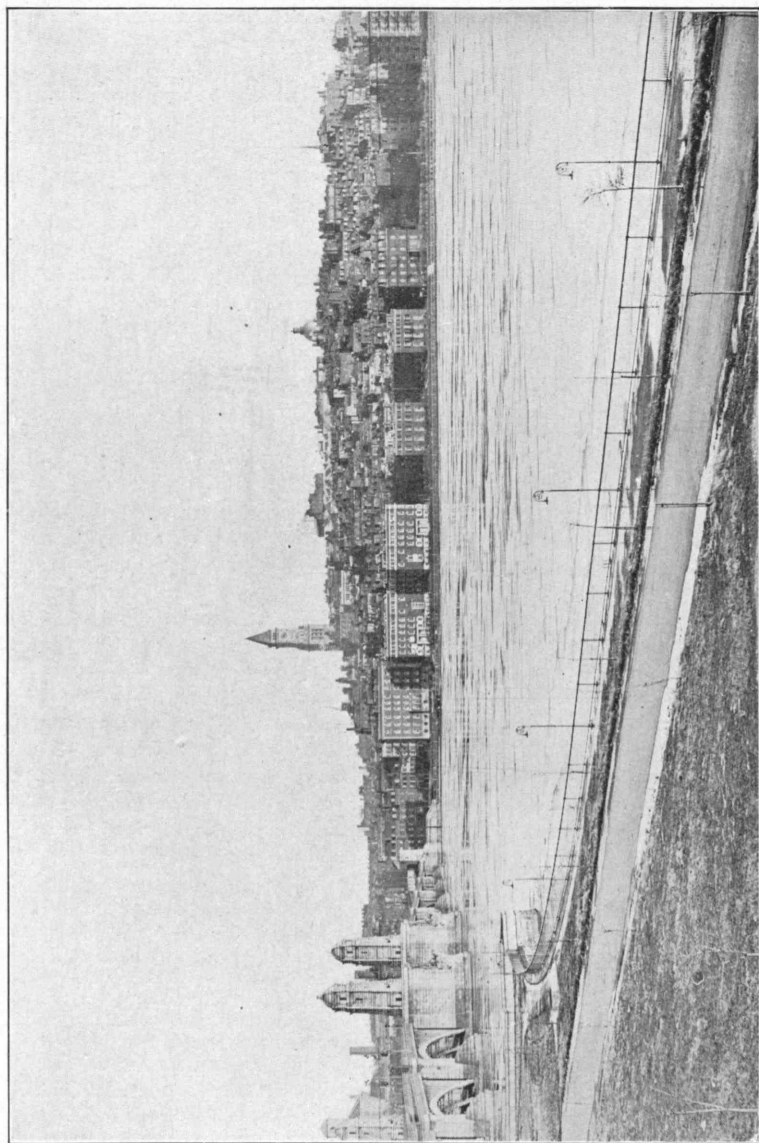
Third, a practical interest centers in the consideration of the legal aspects governing the responsibility of the vocational school authorities and instructing staff for accidents occurring to the student while using machinery during the courses of instruction, and their moral obligation to do all in their power to reduce these hazards by every means within their command.

It has been generally held that there is no liability if those in authority have taken reasonable precautions in protecting dangerous machinery by the use of ordinary safeguards, exercised care in giving instruction to the pupils in the use of such tools and machinery, and provided competent teachers for such work. It is, furthermore, generally held that a vocational school in which power-driven machinery is used for the purpose of instruction is not a factory in the meaning of the law, hence not subject to the provisions of the law relating to the use of dangerous machinery. However, it is quite possible that the failure on the part of a board to adopt definite rules or take adequate precautions relative to the use of such machines might be deemed a negligence for which the board could, with reason, be held responsible to such state, fire, marshal or laws governing fire prevention and exit-drill features as may exist, but observance of the letter of the law only should not be considered when such may be obviously inadequate.

In view of these considerations, based on good ethics and sound economics, it is



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VIEW OF BEACON HILL FROM THE LIBRARY

apparent that vocational schools ought to go even farther than required by laws governing schools and factories, and the complacently accepted customs of social and industrial life, in eliminating or safeguarding hazards and carrying out fire and accident prevention works, teaching proper hygiene and eliminating the dangers of industrial or occupational diseases. What more natural, therefore, than the study of safety and hygiene by the Research Division and the establishment of a helpful source to which the schools may turn for aid and by which advice may be given? The concrete results in the improvement of human relations thus obtained should be both evident and inspiring.

Vocational schools have been intrusted with an immediate patriotic duty in connection with the vocational rehabilitation of disabled soldiers and sailors, and the industrial placement of discharged men in the service, this work having been placed in charge of the Federal Board under the terms of the vocational rehabilitation act. These young men have been disabled or diseased while serving their country at the call of duty. For this noble service and sacrifice we owe them a debt that can never be fully repaid. The least we can do is to see to it that we do not allow our school and industrial systems to subject them to further dangers and horrors while pursuing courses of instruction aimed to make them useful and contented citizens or economic and social assets. Most assuredly we have an immediate patriotic duty, both the vocational schools and the Federal Board, which is a consecrated obligation, to so protect these young men during their period of vocational education, and to so instruct them in the fundamentals of safety and hygiene, in whatever course of study they may elect to pursue, that they will be forever removed from these industrial and social menaces, or at least cognizant of their lurking presence, so that they may be on guard to cope with them as they arise. It is upon this work that we are now concentrating, in order to be of immediate help to the schools presenting courses of study in various vocations. In connection with each outline of a given course of study, we will present the hazards of that particular vocation with the safeguards therefor.

We have a future vision of some means to provide for the promotion of vocational rehabilitation of persons disabled in industry or otherwise and their return to civil employment. This could be brought about by suitable legislation patterned after the original vocational education act, whereby the states could accept the act, and receive federal financial aid in proportion to their populations, provided the states furnished an equal sum of money; each state to co-operate through suitable state boards, such as the vocational education, workmen's compensation, or other suitable agencies, with the Federal Board for Vocational Education. The Smith-Bankhead bill, now before Congress, provides for the promotion of vocational rehabilitation of persons disabled in industry or otherwise, and their return to civil employment, the details being patterned after the original Smith-Hughes Act, and the Federal Board for Vocational Education being empowered to carry on this important work.

The need for such work is made apparent by giving thought to the following statistics which have been prepared covering five common disabilities, as follows: Loss of hand, arm, foot, leg, and eye, or the use thereof. The statistics show the average age of the wage earners receiving these injuries to be between thirty and thirty-three years. It is reasonable to assume that men of this age may continue to be wage earners and effective units in our industrial systems for a period of twenty years. Yet this chance is denied to at least fourteen thousand American wage earners who suffer one of the five disabilities previously mentioned, and many more thousands suffer a disability so great as to become permanently crippled and thrown on the

human scrap heap, or so injured as to be denied their former vocation and generally left to shift for themselves without an opportunity to be trained for a new means of obtaining a livelihood. It is safe to say that there are several hundred thousand such desolate human sacrifices in this country today who never had a chance, yet who would welcome the opportunity to be rehabilitated in a way to become useful, self-supporting, and self-respecting citizens.

In view of these facts, we are justified in considering our vision as epoch making in its scope, and we believe not too altruistic to be in harmony with the spirit of the times. Our watchword is service to our industrial unfortunates with the creation of a new hope in their breasts.

This article has outlined a few of the essentials for the fruition of our aspirations; vitality will be given our efforts if our work in safety and hygiene is utilized to the utmost by those whom we aim to serve.

AN ALUMNA IN PALESTINE

Also an alumnus

ONE of Prof. W. T. Sedgwick's women students of last year in biology and public health, Miss Clara McWhirk, has just received an appointment as bacteriologist for the Red Cross Commission in Palestine. Miss McWhirk on leaving the Institute went to France in the Bureau of Medical Research and Intelligence of the Rockefeller Foundation and she has just been commissioned to go with the Palestine group. The Red Cross is maintaining a regular American hospital in Jerusalem of fifty-five beds, and in connection with it a thoroughly equipped laboratory, and dispensary, a children's hospital and clinic and workrooms. In the latter more than fifteen hundred women of all races are at work on garments, hospital supplies and the like.

Another of Dr. Sedgwick's former students, Samuel M. Schmidt, '11, has already been in the Holy Land for some months as sanitarian to Dr. Finley's commission. Mr. Schmidt was for a while inspector with the health department of Boston, went next into social settlement work in this city, followed the same line of work in Cincinnati and returned to Boston a short time before being sent by Dr. Finley to Palestine.

ATTENTION PLEASE

Old numbers of the REVIEW wanted

THE Alumni Office finds itself without sufficient copies of the November, 1918, and January, 1919, issues of the Technology REVIEW to supply the demand of the unusually large number of new subscribers.

Will those subscribers to the REVIEW who do not wish to keep their copies of the November, 1918, and January, 1919, issue for binding or for permanent reference please notify the Alumni Office that the copies are available, and postage for the return of these REVIEWS will be forwarded.

THE INSTITUTE'S FIRST NEIGHBOR

Is also one of her children—A. D. Little's new laboratory
on the Charles

"As Franklin brought lightning out of the clouds, so Arthur D. Little, '85, has brought chemistry from its academic remoteness in the high seats of learning down into the very heart of the business world." So begins the "American Architect" in its description of Mr. Little's new plant.

Chemists of the Middle Ages, the article goes on to say, bent all their efforts to transmute baser substances into gold. Our more recent chemists have had no fixed purpose in their experimentations, but have loved the abstract study of the elements, and the spirit of adventure among strange forces has kept them eager. Now the wheel of fortune brings us back the old alchemist, Americanized, a man who turns all the baser substances to gold. The baser substances are given an enhanced value, and the gold flows into the pockets of this alchemist's clients.

If you want to buy your coal by the B. T. U., paying for heat instead of weight, and getting something that is designed for the cellar rather than the roof, here you can have it arranged for you. If your mill is embarrassed with a seemingly useless waste product, here you can be shown for a modest fee how to convert it into a profitable commodity of commerce. If you are not certain about the quality of the article that you are buying, whether that article be wool, copper, dyestuff, maple syrup, soap, gasoline, flour, tracing paper, horse-radish, shoes, or T. N. T., no matter what your doubts, they will be dispelled at this breeding-place of miracles. The acid test will be applied and you will know the quality of your purchase and consequently its market value, without the uncertainty of the written guarantee of trade.

In order to perform miracles regularly on a business basis from nine to five, week days, Aladdin has built him a cave on the Charles River Basin a couple of minutes from the heart of Boston. The cave, which harmonizes on the outside with the Institute buildings not far away and which is a genuine asset to the beauty of the Basin near the West Boston Bridge, is the work of two other Technology men, Kilham, '89, and Hopkins, '95. We print somewhere or other in this issue cuts of the outside of the building, the view of the basin therefrom and a couple of interiors.

This cave contains one of the most complete organizations conceivable. On the first floor are the administrative offices, a publicity department, a bookkeeping and filing department, and an industrial chemistry museum. The second floor houses the only special industrial chemistry library on record, a draughting department, a number of special research laboratories and a large laboratory and offices for general research. The top floor has a general analytical laboratory with offices, and special laboratories for fuel analysis, microscopy, paper testing, photography, textile work, water analysis, metallography, etc. At the western end of this floor is a lunch room with kitchen for serving the entire staff.

The basement contains one of the most important items of the entire organization, a complete pulp and paper mill for the experimental manufacture of all grades and kinds of paper, and the determination of the paper values in various waste products of other industries. At the western end of the basement is a large laboratory for full-size tests to supplement smaller laboratory tests made upstairs. These tests

are called "try-outs." The remainder of the basement is occupied by coal preparation rooms, grinding room, shop, stock room, with electric lift to subsidiary stock rooms on the various floors above, sample storage and file rooms.

This, roughly, is the list of activities provided for. Such a program requires a very complete mechanical equipment. The laboratories are supplied with steam both high and low pressure, vacuum, compressed air, hot and cold water, distilled water, gas, electricity for light and power, direct and indirect phases and varying voltages. This requires gangs of pipes in every part of the building, with hundreds of outlets at the benches. The pipes are run in parallel groups, exposed in the rooms and on the basement ceiling. The pumps for vacuum and compressed air are automatic, and the ports in the laboratory cocks are nicely adjusted for vacuum, etc.

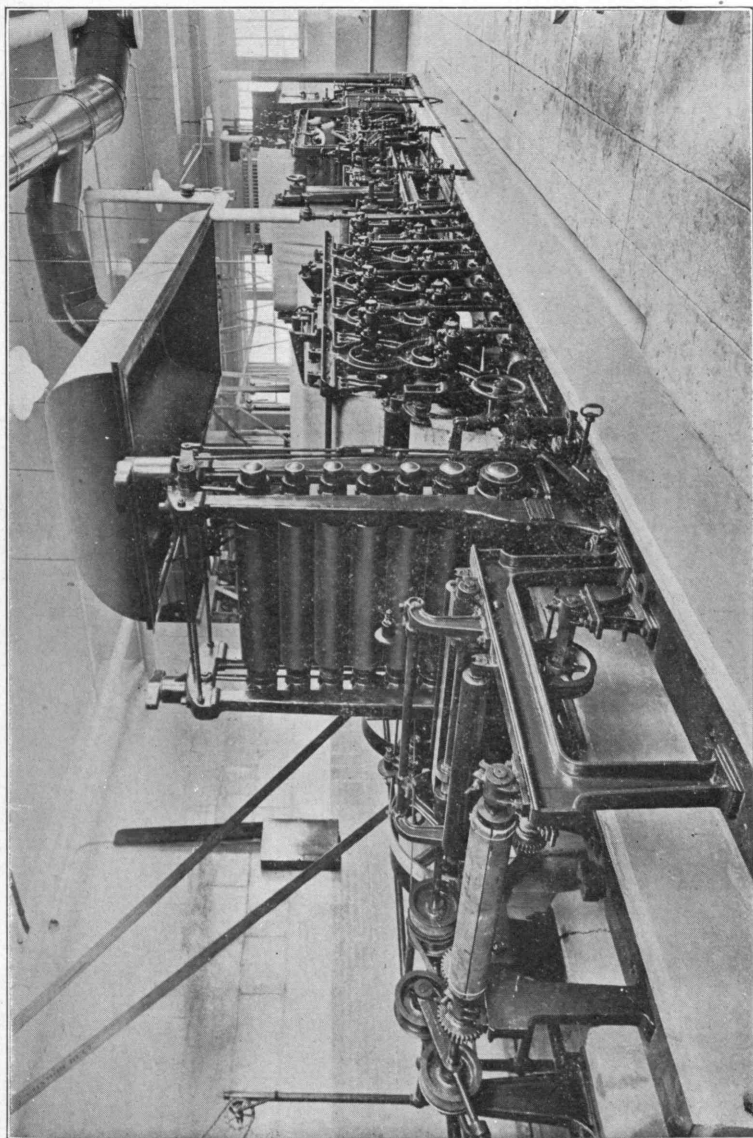
The general construction of the building is fireproof, with a minimum of steel, floors and roof of fireproof construction and piers of concrete. All construction bays are equal, so that the building can be repartitioned at will to form new room units. The floors are finished in linoleum, except the main laboratories which are red tile, and the corridors and toilets, which are terrazzo. The walls are hard plaster, painted.

For the comfort of the employees the company has provided not only the lunch room, but ample rest rooms, bubbling fountains and a roof terrace over the one-story "L". Under one roof, therefore, are housed all the many activities of a new and interesting industry, offices, laboratories, lunch room, library, museum, and publicity department. If any facility were wanting, good neighbors are not far away, for the building itself is alongside the new Massachusetts Institute of Technology on the esplanade.

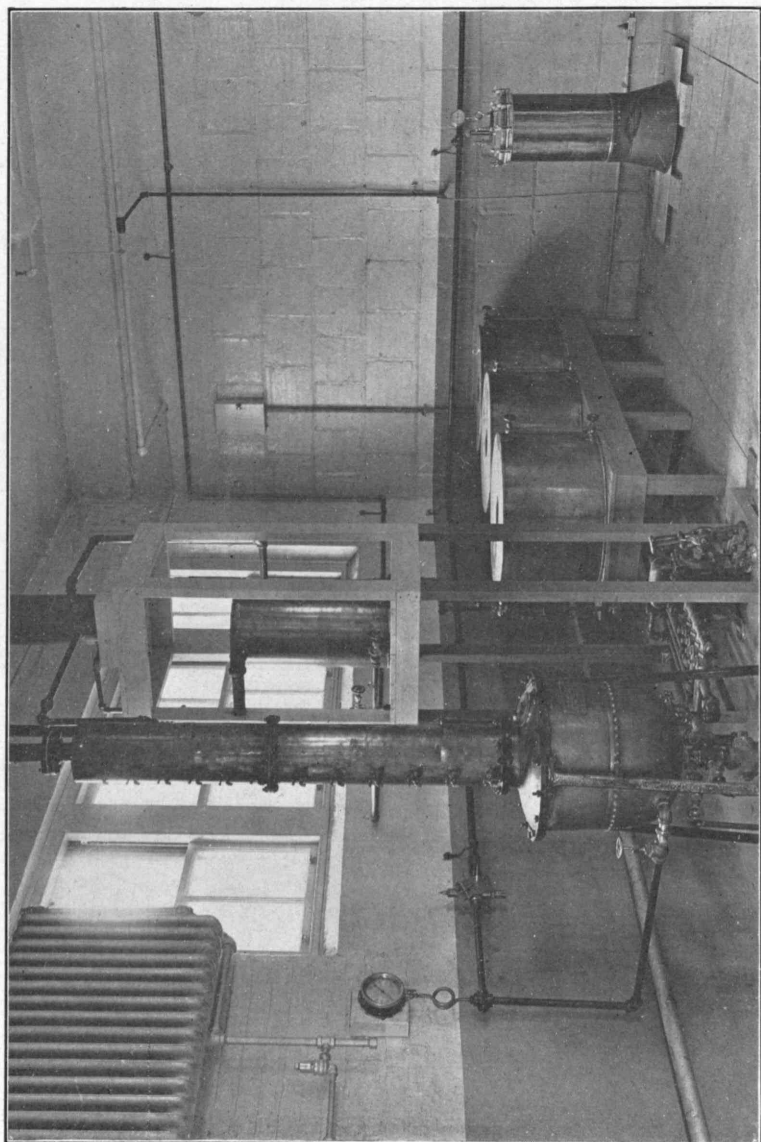
For a more detailed account of what the Little organization is doing, it is by all means best to let Mr. Little speak for himself in his little brochure "Chemistry in Overalls," because for sheer good-humored cleverness of phrase and attack, the Little publications are hard to equal. Their house journal is full of "most excellent jesting" and they are glad to send it abroad to spread the gospel.

DISTINGUISHED FORMER PROFESSOR DEAD

PROF. EDWARD C. PICKERING, director of the Harvard College Observatory at Cambridge, Mass., since 1876, died at Cambridge February 3, at the age of seventy-two. He was graduated in 1865 from the Lawrence Scientific School and from 1868 to 1876 occupied the Thayer chair in physics at the Massachusetts Institute of Technology. Here he established one of the first laboratories used in student work and wrote a textbook on "Physical Manipulation" which has long been regarded as a standard. He was the recipient of many degrees and medals from universities, scientific institutions and societies and attained an international reputation in the astronomical field. In the varied and exhaustive investigations carried out under his direction electrical methods were brought to a high stage of development, notable in connection with the Harvard Observatory's equipment and that of other astronomical plants which have interchanged ideas with the Massachusetts Institute of Technology.



EXPERIMENTAL PAPER MILL
THE PAPER MACHINE WITH DRIERS AND CALENDERS



COMPLETE RECTIFYING STILL, TWENTY-FIVE GALLONS CAPACITY

H. M. WAITE, '90, ON THE RHINE

One of the most interesting accounts we have seen anywhere of the actual conditions in Germany shortly after the signing of the armistice, is that which follows, which we are glad to be able to reprint through the courtesy of J. E. Barlow, '05, from Colonel Henry M. Waite, '90, former City Manager of Dayton, Ohio. We commend the last sentence to the attention of Tech men.—Ed.

Not far from Christmas and I am a long way from home—but still hoping.

I wrote to Barlow of some of my experiences with the army in the advance section. We had a lively time keeping up with the third army on its advance. It was a wonderful advance and will be written up some day as a military achievement. However, they reached the German frontier and thank the Lord they were held there a few days by the armistice. This gave us a breathing spell. We smoothed up some of our hurriedly built railways, got others connected and commenced to work on the second mains. We had had only time to get one track through by using material from the second, and we were then on the well established and efficiently run and undamaged railways of the Duchy of Luxemburg and Alsace-Lorraine.

I had had quarters in Luxemburg for several days and was beginning again to have what seemed the luxuries of life—a hotel with steam heat (a little part of the day).

Just as I was ready to sit back and see things run, I got orders to report to advance general quarters to have part of the utilities and public works under the civil affairs in the occupied territory. My Dayton experience got me that, I suppose.

I sent my baggage to Treves and was all ready to follow when the German high command asked for a technical commission to go to Coblenz and consult with the German staff about the details of occupation, particularly in the Bridge Head.

I was chosen one of three, afterwards two more, and we beat it for Spa to get more instructions and information.

Then I had my second awakening as to the comfort of life—dugouts improve as you get away from No Man's Land. We found our armistice delegation housed in a magnificent house located in a big park or estate. It was Von Hindenburg's headquarters.

We were shown into an immense living room, a large table with magazines, rugs, pictures, large easy chairs, steam heat (put in by the Germans) and a large fireplace with a roaring American fire.

Never will I forget that picture after a cold ride of five or six hours. It was an American club setting, and I wanted to be ordered to Spa permanently. We had dinner then, having some wine carelessly left by Von Hindenburg—he is a good judge.

Next morning we had a meeting at French headquarters, a large, beautiful house in same grounds, which was used by the Kaiser. They all had bomb-proof cellars. Von Hindenburg's lead down from the cellar of the house. It had a table, rug, chairs, electric light, fan and heater and telephone and about twelve feet underground and of concrete. He was safe unless they undermined him.

From there we beat it for Coblenz. That was an interesting trip. We had to pass through French and American lines. It was the fourth of December and we had begun our advance into Germany.

If you want a pleasant drive get on a road full of advancing troops, with wagon and truck trains, particularly on a muddy, rainy day, when there are a few in the

ditch or crosswise of the road. There is another class of driving, however, which is more exciting. That is to be in a big hurry some rainy or foggy night at the front, when no lights are allowed and the muddy roads full of troops and truck trains going in both directions. How it is done I don't know, but you get through somehow. Of course, it does one thing, it makes you stay on your side of the road, and every one else. So you are all right until you start to pass some truck train. Then you sit up and take notice.

The trip down the Moselle is a wonder. We had most of it by daylight. After we passed our front outposts we had clear sailing until we caught up with the Germans. We, of course, were some curiosities, and were gazed at coolly but civilly. After dark we heard once or twice, "Heraus mit em." We decided that might have been caused by the fact that we had a limousine and rubber tires and they took us for royalty.

Whenever we stopped and asked directions they were promptly and courteously given. When we got to the outskirts of Coblenz the German soldiers were thick but they gave us the route. A woman said she would show us the way, so she got in the car and directed us to police headquarters, the haven, I presume, of all suspects. She was very much interested to know if we were first Americans. When she was told yes, she was much pleased. As long as we were at police headquarters we had them send word to the German staff that we had arrived. We went to the Coblenz Hof, which is right on the Rhine. The fact that it was German headquarters did not hinder us, but it embarrassed them from the surprised way the officers and men looked at us.

Here was another terrible shock. We understood it was the best hotel. It was as modern as any American hotel. Large, comfortable rooms, good furniture, twin beds, pink silk comforts, large, modern, tiled bath rooms, steam heat and oceans of hot water. We delayed all diplomatic relations and took a much-needed scrub, my first for some time.

To save any embarrassment we had dinner in our rooms. Punk food, a tasteless soup, boiled meat, potatoes, cabbage, and something they had the nerve to call coffee—hot and brown. We afterwards found it was made of beets. The bread we could not eat, fortunately we bought some bread and canned meats, but no coffee.

In an hour after a German meal I am as hungry as before. They are very short of grease. We put out an S. O. S. call and had some American supplies sent up. We felt we were being given the worst they had for effect and knew they did not have any too much.

They are desperately short of cotton and cloth. The table cloths are of crimped paper, napkins papers. The bandages used in the hospitals are rolls of crimped paper. Most of the twine is paper, gunny sacking is made by weaving threads of paper. It is surprising how strong it is. Electric wires are insulated with paper. Some have a very thin covering of linen, then waterproofed.

Their soap is made of clay, colored, scented and enough soda to cut the dirt. I saw a German being shaved. They rubbed his face with something that sounded like sand paper.

Our first meeting with the Germans that night was interesting. They came in with sabers, side arms and their cute little trench knives—with tassels. Afterwards we counted up and found there was one pistol in the crowd and it was in his cot. They removed the side arms. Later they asked if we objected to the sabers. We told them no, it was not a part of our field equipment, the Sam Brown belt took its place. They clicked their heels and bowed—we clicked and did so. Now every time I open my mouth I click my heels. They are a wonderfully efficient lot.

Next morning we had wonderful opportunity to see the German army cross the Rhine. The hotel was directly in front of the old pontoon bridge. They passed in review in front of the hotel. It was a foggy morning and you could not see across the river. The bands played, colors flying, wagons and horses trimmed with green and colored paper. Some wagons had four Christmas trees, one at each corner, decorated with paper. A noticeable lack of trucks and many little Russian horses.

As the officer at the head of each company reached the reviewing officers, drawn up on horseback in front of the hotel, every man in the company as of one voice yelled "Hoche." Women were in the street giving the men cigars, cigarettes and post cards. As they approached the bridge the band played, "Wacht am Rhine." The men would sing and they, with the colors, would disappear into the fog. All in wonderful order and discipline. This was the defeated, humiliated and crushed German army. The question continually arose in my mind, what starts and ends war?

Of course, we saw the best of it. That wonderful German rear guard. They play tunes on machine guns. As rapidly as they retired to the Rhine everything was left perfectly policed behind them. No dirt or rubbish, everything cleaned up. The last division on the bridge was the 76th, a Bavarian division, and was in front of us in the Argonne. Some fighters, but they say the same of our men.

I stayed in Coblenz in that wretched dugout for two weeks and saw our first troops come in. Let me tell you they looked good. The first was a battalion of the 9th, which came up by train to act as guard, on request of the Germans, after the Germans had left and before our troops arrived. They got there on a Sunday. We went out to see them detrain. Let me tell you the Germans had nothing on us. As they went down the street no bands, no colors, no noise, just business. You should have seen the Germans watch them. There was one interesting fact. In all the German troops that passed not one imperial flag was carried and of all the flags that were out in Coblenz I only saw two imperial flags. When our troops arrived not a German flag to be seen anywhere.

I have had some very interesting work with the various local and provincial German governments. We get everything we ask for and quickly.

I had to go to Cologne a few days ago and for a stretch of about fifteen kilometers, twelve of it were paved and for the most part with Durax. They use a larger stone than we do in the streets and roads, about an inch larger. They also use it in sidewalks, using a block about the same size we use in the streets. If the war had lasted a few years longer Germany would have had many of her principal roads paved.

Here in Treves the city owns its water works, electric plant and street railway. The electric plant is quite interesting—two steam plants and one hydro electric. They distribute power and light all through the surrounding country and it pays well. The indebtedness on it was sixteen marks, now reduced to twelve marks. They must retain so much each year. During the war they have raised the rates fifty percent without a murmur. All they do here is post a proclamation, the people read it and go do it. The oberburgermeister in Coblenz issued one while we were there and before the army got there—everything to close at 11.00. Children under fourteen off the streets at 6.00. No groups of more than three people on the streets after 9.00. They read it and did it.

Well, this is a long letter, but it is Sunday. I try to be quiet Sunday afternoons.

Here I am suffering for the comforts of life. I found my brother-in-law here, now General Brown. He had taken a house as his billet, retaining two old servants. So four of us are suffering terribly. It does not have steam heat, but lots of Dutch

stoves that look like monuments, a bath room and our own food. Now, instead of an egg and chocolate as I had in France, I get coffee, bacon and cakes—a white man's breakfast.

At Coblenz in the Stadt theater there was something every night including Sunday with a matinee Wednesday and Sunday. A very good small orchestra and a very creditable opera every night, except two when they gave a play. One night I heard a wonderful symphony by the orchestra, or at least eleven of the solo instruments with piano. They gave Carmen and Boccacio, while I was there and several light German operas. The best seats were five marks. We get 5.35 francs for a dollar and 142.85 marks for a franc. So you see what the seats cost and the place only seats three hundred and fifty people. The house was crowded every night I went. The city helps out, during the war though the house only paid for light and heat and not that much this year.

WHEN WILL DAYTON WAKE UP? PUT PRIVATE AMBITION ASIDE AND WORK FOR THE MOST PEOPLE?

A FEW MORE 1919 DIPLOMAS

And a few more instructors

THE Institute is still graduating members of the class of 1919 as fast as they complete their work. The last group to be recommended for degrees by the faculty includes seven students: Charles J. Parsons of Brooklyn, N. Y., and W. H. Vogt in Mechanical Engineering; Miss Clara Poppic of Brookline in Chemistry; Edmund Adams of Concord, N. H., and Joseph E. Cannell of Everett in Electrical Engineering; and Joakim Lehmkuhl of Bergen, Norway, and Francis Anton Weiskittel of Baltimore in Engineering Administration.

A few additions to the instructing staff have been made by the Corporation: D. L. Webster to be assistant professor of Physics, Leon W. Parsons, William B. Ross and L. W. Fuller to be research associates in Applied Chemistry, and Lieut.-Col. Fred M. Green to be assistant professor of Military Science and Tactics, to assist Col. E. T. Cole.

A TECH MAN IN MEXICO

FROM a letter written to C. E. Locke, '96:

"Conditions in Mexico are bad in spite of newspaper talk to the contrary. In the large towns everything is quiet, most of the railroads operate with more or less regularity and you can do business in spite of the heavy taxes and government graft. Twenty miles away from a town or railroad you are up against it. The whole country is infested with bandits. Perhaps calling them bandits is quite too good a name for them, they are just a common variety of thieves. They are not organized, but are mostly bands of from five to fifteen armed peons that operate in the neighborhood of their home ranch or town. Whenever the government sends out troops to hunt them down, which is not often, they hide their arms and horses and are good peons until they see another chance to make a cleanup. This sort of thing makes any business requiring work out in camps away from the towns practically impossible."

RUSSIA AFTER THE ARMISTICE

Another letter from E. W. Bonta, '07, doing Y. M. C. A. work
among the Bolsheviks

THANK GOD the war is over, and thank Him more particularly that Prussian militarism is crushed. And now you may be sure that most of my waking thoughts are fixed on getting back home. But how soon that time will be is very hard to say. There is much work for us to do here; it seems very useful, very helpful. There are few secretaries to do it. More secretaries are promised from America. I am very happy in my work here. Have what is to me an ideal layout. English-speaking troops to serve and a staff of Russians to work with, for which I am glad, because I am very fond of them. It is excellent practice in the language, too. I have to speak and hear Russian every day. Even in Moscow I was constantly with Americans or English-speaking Russians, so I am actually learning more Russian here than I did there. But English-speaking troops are more congenial to work with, because they understand what we are and what we are about. It was discouraging working among the returned prisoners in Moscow; they so often failed to grasp what we were and seemed unresponsive, many of them, poor souls. So many were "from the mind gone out," as the Russians say. Of course they couldn't understand. Others of them, particularly among the officers, understood very well and many times there were tears with their smiles when they thanked us.

Then, of course, I could not use the language and I was never sure that our Russian secretaries were painting us right. But the greatest damper on my enthusiasm in Moscow was the food situation. What the men needed was food, and food we could not get. It was hard giving out cigarettes made of hay, and letter paper and games when you saw them watching with hungry eyes for a measly bowl of soup and a dish of porridge.

Here, all is different, and I can throw myself into the work with enthusiasm. Another thing that made it hard for me in Moscow was the feeling that ours was a "paternal" sort of work. I really had looked forward to a world where there no longer would be one class that gave and another that received, but all would be "tovarishchi" together. That is what I thought we had found in Russia. But I have learned differently. That cry about condescension was nothing after all but the cry of the under dog and, when he got on top, was there equality? On the contrary, he was only too glad of the chance to do a little condescending himself.

His idea of getting equal was "getting even." I am afraid that happy state is the work of a generation more highly civilized than yours and mine.

I am sitting here writing in my room with three Russian boys about me. Every night it happens. They work hard and faithfully all day long and then at night drop in on me for orders for the following day. I give them instructions and return to my work. They stay on, so I think perhaps there is something else on their minds and ask them as tactfully as I know how in Russian. Tact is a difficult thing to use when you know only a few words of a language. They assure me there is nothing more, and still they stay. After working from 9 A.M. until 7 P.M., I expected they would be ready to go home, but if they wish to stay they must at least have something to smoke, so I pass cigarettes. Meantime, I am getting hungry and longing to ask

Pavel to get our supper ready. Finally, in desperation I send Pavel downstairs for the "kipitok" (boiling water) and we all have tea, biscuits and perhaps a little marmalade with it, if I have any and "bang, goes sixpence," as Tommy says it, for everything costs dear at present. It takes a Russian a long time to drink a glass of tea.

It's always poured into the glass boiling hot and then you let it stand in front of you for ten or fifteen minutes and treat it with absolute indifference, as if tea were the farthest from your thoughts. At last you calculate that it has cooled sufficiently to pick it up and you encompass the glass with both your hands, so warming the hands. It's a pleasant pursuit. Then you pick it up and holding it to the light admire the pale amber color. Russians always drink tea very weak and without milk. The glass is still piping hot and you are probably burning your hands. Set it down quick. Now grab the soft end of your ear with your burning finger. See how it takes the fire out of them. Take a lump of sugar and bite off a small chunk with your front teeth. This is "kusotchok"; if it was a big piece it would have been a "kusok"; but being a little piece it has to have a big name to make up. This kusotchok you tuck in your cheek and imbibe your tea through it. A pleasant sensation, that. There, they're getting up to go now. Now Pavel can go down and get our supper—baked beans, cocoa and stewed apricots. Then after that we will have a lesson in English. Some day, Pavel will be an English interpreter and earn better money than he is getting now. You wonder how fast the Russians pick up a strange language.

RAZING WAR-TIME STRUCTURES

THE Institute is now beginning to dismantle some of the structures that were erected for war purposes. The buildings along Massachusetts Avenue, now the barracks of the Provost Guard, will not be disturbed, save that the headquarters may be moved to another site when the construction of the Pratt Memorial is begun, but towards Amherst Street, there have already been a number of removals. The gun pits have disappeared and also those structures of mystery in which gas experiments were formerly carried on. The rifle range along Vassar Street is already levelled and the engine sheds are soon to go. The band stand also, erected for the use of the musicians of the Naval Aviation Detachment, has been removed and will be set up on the Parkway.

THE A. U. U. TO BE PERMANENT

THE American University Union in Paris is to be put on a permanent basis. The city of Paris has given a valuable site for a home for the Union and plans have already been drawn for a new and adequate building.

THREE TECH MEN HELPING RESTORE FRANCE

Monaghan, '01, Main, '71, and Professor Jackson

MAJOR JAMES F. MONAGHAN, '01, Ordnance Bureau, U. S. A., has been appointed an attache on the staff of Brig-Gen. McInstrey, under Col. F. M. House, on the Peace Commission in Paris.

At present he is a member of a board of investigation to determine the value of all the textile plants of France and Belgium destroyed by the Germans.

The other members of the board are Charles T. Main of Boston, Major D. C. Jackson, head of the Electrical Engineering Course at the Massachusetts Institute of Technology, and Major John Osborne of Boston.

Major James F. Monaghan has lived in Waltham for several years and is a well known architect and civil engineer. He was formerly connected with the 101st Engineers and later was made chief of the Civil Engineering Bureau for the supply division of his department. He received his early education in Lowell, and in 1897 was colonel of the Lowell High School Regiment.

He was graduated from Massachusetts Institute of Technology in 1901. In October, 1917, he was commissioned a captain and last June was promoted to the rank of major. He is a member of the American Society of Mechanical Engineers, Boston Society of Civil Engineers, New England Cotton Manufacturers' Association, Waltham Council, Knights of Columbus, and Waltham Lodge of Elks.

The work of Charles T. Main, '76, was commented upon in the January issue, in connection with Professor Swain's visit to France.

Major Dugald C. Jackson is an international authority on electricity and has been called abroad several times on civil matters in connection with public service corporations. With Mr. Main and others he went to France on December 5.

In 1911 he went to England to examine and appraise the entire telephone system of England. Professor Jackson, though less than fifty, has had a notable career in the engineering world. He was graduated from the Pennsylvania State College at the age of twenty and devoted two years to electrical engineering at Cornell University. St. Joseph, Mo., Omaha, Salt Lake City and other cities owe their present lighting plans to his work. He was a professor of the Massachusetts Institute of Technology and last May was commissioned a major in the Engineer Reserve Corps. Major Jackson was expert advisor of the Massachusetts Highway Commission and president of the American Institute of Electrical Engineers.

TO MOVE THE NATIONAL CAPITAL TO CHICAGO

That is the idea of two Tech Alumni. Yes, they live in Chicago!

GEORGE BAYARD JONES, '05, and Thomas E. Tallmadge, '98, appeared recently before the engineers' subdivision of the Chicago Chamber of Commerce, to present an idea, complete with maps and layouts for the city planning involved, whereby the national capital, to be named Lincoln, should be established on the lake shore north of Chicago. Mr. Tallmadge presented a very handsome and interesting plan for such a new city, to replace the architectural absurdities of Washington, as it is at present, and Mr. Jones presented the practical aspects of the problem.

Among the necessities for an enlarged national capital which will be commensurate with the United States' position as a leader among the world powers, Mr. Jones pointed to the following:

"The center of population has moved westward from a point a few miles north of Washington to a point in Indiana about two hundred miles southeast of Chicago," said Mr. Jones. "Washington, instead of being the center of the United States, as it was in 1789 at the time its location was decided on, is now situated on the eastern fringe of a country 3000 miles wide from east to west and 1200 miles long, and supporting a population of more than 100,000,000 people. It is located on the outskirts of the business life of the nation and has made very slow progress, as compared with many other cities."

It should be convenient of access to all parts of the country and hence should be located in the Middle West. Such location would insure safety and efficiency from a military standpoint.

It should have a background of resources based on agricultural wealth, coal, iron and other natural resources.

It should be near a transportation center, both rail and water.

Chicago fulfills all these demands. It is one of the great commercial centers of the world. It comes nearer feeding the world than any other one market point. It is capable of indefinite expansion, and it represents the new center of population, the Middle West.

He called attention to the report of the Public Buildings Committee, made in December, 1917, and published in 1918, in which it is stated that "the government's portion of the city of Washington is destined to be almost completely rebuilt." The report further pointed out the need even before the war for twenty-six buildings at a cost of approximately \$48,000,000, which, with the cost of certain additional land, would bring the amount to \$59,000,000.

There are precedents for moving the national capital, for it was first placed in New York, then Philadelphia and then Washington, and a proposal to move it to St. Louis in 1871 met with considerable favor, but died out after vigorous steps were taken to improve Washington.

The site proposed by Mr. Jones is the high ground on the lake shore a few miles north of Chicago. The proposal for the name of the new capital is Lincoln, in view of Lincoln's association with Illinois. The present government departmental buildings in Washington could be used as eastern administrative headquarters.

The new capital could be financed through a bond issue, enabling the government to control the buildings, direct growth, and benefit by the increase in value of land, an increase that would in time retire the bonds.

TECH MEN AT MUSCLE SHOALS

Alumni at the nitrate plant get together for a dinner

THEODORE H. SKINNER, '92, who acted successively in the capacity of field engineer, works engineer and finally director of construction, Air Nitrate Corporation, in the construction of United States Nitrate Plant No. 2, Muscle Shoals, Alabama, from March 12, 1918, until January 4, 1919, found a number of Tech men were connected with the work, and in December got as many of them together for a little dinner as could spare the time. It is thought that a memorandum of the class numerals and names might be of interest in the alumni record.

This job was the biggest single enterprise which the government undertook as a war industry, and it is very satisfactory to note that it was completed on time, and is turning out the work for which it was intended both in quantity and quality way in advance of the expectations of its designers and government experts who were consulted in the matter.

It is thought that there were a number of other Tech men at Muscle Shoals during the progress of the work, but they got away before this dinner was held. The abbreviations used after the men's names are the initial letters of the companies connected with the work: W. C. K. & Company, being Westinghouse, Church, Kerr & Company; A. N. C., Air Nitrate Corporation; J. G. W., J. G. White Engineering Corporation.

The men who attended the dinner at Executive Mess, December 6, 1918, were, by classes:

1892: Capt. Theodore H. Skinner, IV, construction engineer, construction director, Air Nitrates Corporation, Muscle Shoals, Ala.

1906: George W. Burpee, I, resident engineer, W. C. K. & Company; F. J. Van Hook, I, field engineer, W. C. K. & Company.

1908: Herbert W. Flaherty, I, assistant to construction engineer; C. W. Kennison, III, assistant superintendent Ammonia Gas Division, A. N. C.

1911: Capt. Daniel P. Gaillard, VI, Ordnance Department; Charles M. D'Autremont, expert mining engineer, Ordnance Department.

1912: C. A. Duyser, XI, assistant office engineer, W. C. K.

1913: Guy H. Buchanan, V, chief chemical engineer, A. N. C.; Ross D. Sampson, III, superintendent of Oven Department.

1914: Estes H. Magoon, XI, sanitary engineer, A. N. C.

1915: Lieut. William A. Houser, II, Ordnance Department; George H. Warfield, I, assistant office engineer, W. C. K.; Norman D. Doane, V, control chemist, A. N. C.

1916: George I. Crowell, II, progress engineer, W. C. K.

1917: Yih Tze Chang, X, assistant chemical engineer, A. N. C.

1918: William M. B. Lord, XV, assistant to inspector of construction, Ordnance Department; David M. McFarland, X, Ordnance Department; Herbert B. Larnar, VII, United States Public Health Service.

UNDERGRADUATE ACTIVITIES

HOMER V. HOWES

THE first period this year has been one of regeneration for student activity. Nearly every organization was either partly or entirely disbanded during the regime of the S. A. T. C. This state of affairs necessitated election of new officers.

The first event on the term's program was the election of class officers, which was held the Monday after the opening of the Institute. A record ballot was cast, and this fact indicated that the students, after their period of partial confinement, were glad to have an opportunity to take a part in Institute life besides their studies. The result of the elections was as follows: Class of 1920—John C. Nash, president; John J. Hines, vice-president; Merrill B. Know, secretary; Malcolm S. Burroughs, treasurer; Kenneth F. Akers and Frank L. Bradley, Institute Committee; D. J. Hennessey and Warren L. Cofren, Executive Committee. Class of 1921—William H. Young, president; L. W. Trowbridge, vice-president; John Worcester, secretary; W. R. Barker, treasurer; Garvin Bawden and Richard Spitz, Institute Committee; W. R. Barker and S. W. Conant, Executive Committee. Class of 1922—Sidney Bidell, president; Paul S. O'Brien, vice-president; Thomas E. Shepard, secretary; Ernest N. May, treasurer; F. G. Davidson and D. N. Dillon, Institute Committee; Warren T. Ferguson and Henry C. Gayley, Executive Committee.

Immediately the Institute Committee was organized, and started in its work of directing newly awakened activities.

The professional societies, in particular, have taken a new lease of life. The Mechanical Engineering Society elected H. O. Davidson chairman, and under his leadership the members have made several trips, one of which was to the Waltham Watch Company. The society has listened to several interesting talks, one on thermit welding and another by A. P. Durham on his experiences while in the French Tank Corps.

The Chemical Society, electing A. C. Atwater president, has held one big meeting, at which Professors Talbot and Lewis gave interesting talks on the subject of gas masks.

The Civil Engineering Society, with E. B. Murdough as president, has listened to two very interesting lectures; one by Professor Spofford on the "New Army Supply Base at South Boston"; and the other by Professor Swain, concerning his recent trip to France. The society also visited the supply base, and was conducted through the buildings by Professor Spofford and the engineer in charge of construction.

The Electrical Engineering Society has had a number of meetings. At one of these meetings, Professor Franklin gave a talk on "Mechanical Analogues of Electrical Phenomena," and N. H. Daniels, '96, gave a talk on "Labor Conditions." The members have made trips to the General Electric Company of Lynn, and the American Telephone Company.

Other lesser clubs and societies, such as the Rifle Club, Wireless Club, Cosmopolitan Club, have also organized and have held meetings.

There have been three important smokers during the term; two of these were given by the Tech Show. At the Kommers Smoker, January 10, the usual cheers, songs, with the famous Technology cider, doughnuts and smokes were in evidence. Parsons, Britton, Booth, and Akers of last year's show furnished the entertainment,

while speakers from the different departments outlined the work of the show. The regular Tech Show Smoker, held February 14, was even more successful. J. G. Lee, '21, of Chicago, Ill., and Jesse Stam, '19, of New York City were announced the authors of this year's show.

The really big event of the year was the All-Technology Smoker, which was attended by over fifteen hundred students. The story of this smoker is, however, given a separate heading in the REVIEW.

The Musical Clubs, after giving a concert at the Franklin Square House, February 4, laid plans for the spring concert, which they gave March 7. Two hundred and fifty couples attended and the affair was a marked success.

Two dinners of note were scheduled during the term. The "Tech" invited all its past editors to make merry in the Walker Memorial, February 28, and meet their old associates. Among the alumni responding were Henry Horn, Harry W. Tyler, A. W. Walker, Harvey S. Chase, and H. E. Lobdell.

The Freshmen had their annual banquet five months late, March 14. The speakers were Dr. Maclaurin, Dean Burton, John Nash, president of the Junior Class; Sidney Bidell, president of the Freshman Class, and Edward Brickett. After the dinner, the Freshman made their annual march to Boston, pulling all trolleys and shouting at all policemen en route.

In athletics, Technology was very successful. The wrestling team won five out of seven meets, defeating such teams as Tufts and the Springfield Young Men's Christian Association Training School; while the Freshman wrestling team took the count of the Harvard Freshman. The swimming team met its first defeat in four years at the hands of Yale, after defeating such teams as Brown, Annapolis and Columbia earlier in the season. The track relay team defeated Dartmouth in the Boston Athletic Associations; while to cap the track season Garvin Bawden, '21, set a new record for Technology in the half mile in a trial test, covering the distance in 1 minute, 59 3-5 seconds.

Social events and dances have been too numerous to give in detail. However, the two dormitory dances, the naval unit dance and the Cosmopolitan Club dance are worthy of note. The Sophomores have already elected their Junior prom committee, which will consist of Akers, Cofren, Roman, Whitaker and Gee.

Technique has had its sign-up campaign, receiving fifteen hundred subscriptions. The Sophomores have elected their Technique Electoral Committee, which consists of the following men: W. Adams, P. N. Anderson, W. R. Barker, G. Bawden, E. W. Booth, H. C. Button, D. F. Carpenter, E. P. Clark, L. W. Conant, W. Dean, E. Edwards, Z. P. Giddens, Jr., I. D. Jakobson, H. P. Junod, F. B. Kittredge, W. G. Loesch, R. McKay, R. C. Poole, R. H. Smithwick, R. J. Spitz, D. E. Stagg, E. F. Stockwell, W. G. Waterman, Jr., R. P. Windisch, J. N. Worcester, W. H. Young and M. M. Zoller.

THE TECH CELEBRATES AN ANNIVERSARY

Thirty-eight years of continuous publication—the new home—
hopes for the future

THE annual dinner of the "Tech" held in the grill room of Walker Memorial, February 28, was an important event in more ways than one. First, it marked the moving into the new quarters at Walker Memorial, and secondly, it celebrated the thirty-eighth year of its existence as a successful Technology institution. Members of all the former boards were invited to attend, but many were unable to be there. The present board, and most of the staff attended. During the dinner, several of the former members of the "Tech" spoke about the paper as it had been in their day, and of the bright prospects for the future. Professor Tyler gave a short but interesting talk on the first board of directors.

An epoch-marking step in the development of the "Tech" since its first advent in Institute history thirty-eight years ago has been made by its moving into the new quarters in Walker Memorial. Students about Technology for many years have heard of the activities about their school in the columns of this publication, but there are few who realize how its growth and development have taken place. With new officers, better facilities and a bright future ahead, we feel that some enlightenment on the subject should be given.

About thirty-eight years ago, a meeting of the students at Technology was held for the purpose of considering the publication of a school paper. The "Tech" was not the first paper to be printed at the Institute. A year previous to the founding of the present paper, a publication called the "Spectrum" shone forth for a short time, but soon faded away. Still another attempt was made, but the results of this never reached the press.

At the preliminary meeting which resulted in the founding of the present paper, a committee of five was chosen to look into the matter carefully. The report of the investigation was in favor of the proposed paper. This committee also submitted a plan of administration. The management of the "Tech" was to consist of a board of seven directors representing the various classes. These directors were to have complete charge of the publication of the paper and were to elect an editorial board consisting of ten members. Not only were the directors responsible for this but also to their classes for the property and funds in their charge, and were to hold office until the election of a full succeeding board.

On Wednesday, November 16, 1881, the first issue of the "Tech" appeared. It seems only right, and in honor due, that a list of those first in charge of the news and what was destined to be so great an activity of Technology be printed here: Board of Directors, H. Ward Leonard, '83, president; Henry F. Ross, '82, secretary; I. W. Litchfield, '85, treasurer; Walter B. Snow, '82, and A. Stuart Pratt, '84.

The Board of Editors were: Arthur W. Walker, editor-in-chief; G. W. Mansfield, '82, George J. Foran, '83, F. F. Johnson, '84, Arthur D. Little, '85, Harvey S. Chase, '85, civil and mechanical engineering editor; Greenville T. Snelling, architectural editor; Charles H. Tompkin, Jr., mining and chemical editor; R. Tilden Gibbons, sporting editor; Samuel M. Munn, general advertising agent.

In the first issue were printed the aims of the new paper; the prime motive being

to promote the interests of the students and in conclusion the writer went on to state that "even though the buds of genius do not bloom, even if the beauties of rhetoric and poetry are not developed, even if the paper becomes like the school it represents—only a field for plain, honest work—we shall be sure that we are stepping stones to further attainment."

The original idea was to publish the paper twice during the month; a copy appearing on alternate Wednesdays during the school year. The issue came forth in magazine form of fourteen pages. With the growth of the Institute, the "Tech" thrived and prospered, changing from a bi-monthly to a daily. The latter form, however, proved too much of a task for those on the board and a tri-weekly paper was issued appearing Mondays, Wednesdays and Fridays.

When the Institute moved across the river to its new home in Cambridge, the offices of the "Tech" were also moved from their former quarters in the Rogers Building to the basement of Building 1. When the temporary activities rooms were opened at 75 Massachusetts Avenue, the "Tech" was given room there to carry on its work. With the advent of the entrance of the United States in the war, the feeling prevailed that little time should be given to activities. In accordance with the general trend of opinion, the publication of the "Tech" was cut down to two issues a week, one coming out on Wednesdays, the other on Saturdays.

As the war progressed, the "Tech" still strove on in the face of all difficulties and succeeded in attaining the distinction of being the only activity at the Institute carried on during the troubled days of the S. A. T. C. When, in February of this present year, the Walker Memorial was thrown open to the use of the activities at Technology, the "Tech" offices were moved to that building. Here these consist of a managing board office on the third floor and a news room in the basement.

In a few words the history of the "Tech" has been that of a struggle of an indifferent college paper in its cramped little offices in the Rogers Building on Boylston Street to a firmly established bi-weekly employing two stenographers, an office boy, and read by every true Technologist, be he an alumnus or an undergraduate.

THE BIGGEST DRY DOCK IN AMERICA

You've guessed it—a Tech man helped

HARRISON S. TAFT, '96, II, was one of the chief practical men on the job of building the new dry dock at the Hampton Roads Navy Yard in Virginia which has just been completed in the record time of two years since the first dirt was dug. The dock will be able to handle the largest ship afloat or even projected. Mr. Taft in charge of the concreting of the monster for the George Leary Construction Company, is receiving high praise for his work.

MISCELLANEOUS CLIPPINGS

Massachusetts Institute of Technology is confronted with a housing problem. It has more students than ever before at this time of the year. Technology needs more buildings, according to the school authorities, to care for its constantly growing classes. A report just issued at Cambridge shows that so far as the Institute is concerned more young men are seeking technical education than in pre-war days, and that something must be done to furnish them with adequate school facilities. The Institute report on the subject says in part:

"There is the alternative of limiting registration or providing immediately for additions to the existing structures. One of these would be unfortunate, for reasons presently to be stated; the other demands a surplus in funds which the Institute does not possess.

As a result of the war, when most other colleges are bemoaning their diminished numbers, the Institute has within its walls today more regular students than it has ever had before at this time of year, and only a dozen less than the maximum registration at any time in the past. The precise number is 1944, and this, it is to be remembered, is in the absence of practically the whole of the senior class, which normally numbers about 300."

The report continues:

"A factor of the unwonted and unexpected registration has been the number of young men of the army or navy who have come after attending the special schools of aviation, mechanical engineering, and the S. A. T. C. The number of such men, whose lodging-places were the drafting rooms of the department of civil engineering or the halls of the Walker Memorial, has been thousands in all, and many of them were heard to say that when the war was over they would come to the Institute to continue the studies of which they had merely a taste. With every camp that demobilizes and every group of men that is mustered out, some come to the Institute to register. This is the reason why one hundred men have placed their names on the rolls during the past ten days, and why there are more coming.

Another reason is that more students are coming from foreign countries than ever before. For them the German technical schools are closed and others in Europe temporarily out of commission, so that they turn to the schools of the United States.

Then, again, there is the tremendous freshman class, which numbers 864, against a previous maximum of 524. It is, of course, common experience that there is great 'mortality' in the freshman class. It is natural, since this is generally a period when the methods of instruction change, when the bubble of any easy higher education is burst, but at Technology it has been found that men from other colleges enter the upper classes in numbers that quite make up for the loss in the first year.

Judging from past experience, the number of students next year will be 2500, and the figure 3000 is in plain sight. The question before the Institute is plainly, 'What is the Institute to do with them?'

Some will be found who will think that the existing buildings are quite large enough even for an increased number of young men. They are, however, not well informed about the space demands of modern technical education.

There are certain subjects, of course, where the professor lectures and the students jot down in unison their notes on it, where a thousand or two thousand might be cared for at once as is the audience at a Symphony concert or popular lecture. If the speaker illustrates his talk with experiments, the practical limit of a company that can come within the proper distance for observation is at the utmost maximum about five hundred. If it is a question of steam engine work, perhaps ten or a dozen can crowd about an instructor and see him take an indicator diagram, but if the students are young chemists or physicists or taking the courses in biology and public health, each must have his microscope or apparatus, his own sink, perhaps, and, at all events, his own desk and lockers. It is true, therefore, that with increase in students a technical school must have proportionate increase in laboratory space. Thus it is that the M. I. T. buildings, erected for 2000 students, will be crowded with 2500 and unable to care for 3000—numbers which are really in sight.—NEW YORK EVENING POST.

In the flood of lamentable nonsense that has been let loose of late in the American press on the subject of German science and German scientific literature it is a joy to meet with the opinions of the few persons, here and there, who, though in no sense apologists of Germany, possess a first-hand knowledge of their subject and brains unbefogged by fanaticism. Such a person is Prof. Edwin Bidwell Wilson, of the Massachusetts Institute of Technology. Writing in "Science" on the subject of "Insidious Scientific Control," Professor Wilson hits the nail squarely on the head when he undertakes to point out just in what way the scientific literature of Germany is superior to that of other countries, and the direction in which the rest of the scientific world must bend its efforts if it would secure freedom from German intellectual shackles.

So far as the public at large is concerned, the issue has been deplorably confused by reiterated statements to the effect that Germany has never surpassed, or perhaps has never equaled, certain other countries in the task of adding to the world's stocks of valuable knowledge. In the field of creative science, we are told, German achievements have been grossly overrated. Let us grant this contention with alacrity. What then?

The policeman on his beat, the cab-driver on his box and the provincial politician on his stump may be pardoned for believing that a nation which is not prolific in scientists of the first rank is not capable of turning out particularly valuable scientific textbooks and reference books. Nobody who uses such books, however, should fall a prey to this fallacy. The best didactic scientific books are almost never written by the leaders in scientific thought and the pioneers in scientific investigation. They are written by persons who have a talent for exposition and unflagging industry in assembling knowledge wherever available, and who, as often as not, have never made a single scientific discovery.

Just how have German publications acquired their undeniable hold upon the minds of well-educated scientific workers throughout the world? It is idle to talk of propaganda. The modern business man is well aware of the narrow limitations of advertising that does not rest upon merit in the goods advertised; and propaganda is merely another name for advertising.

Professor Wilson has supplied a partial answer to the foregoing question. It is found in the everyday law of competition. He says:

"The fact is that any scientist must have the means himself readily to look up the literature on any scientific subject; and the fact is that the great compendiums of science, the great yearly reviews of scientific progress, are made by Germans and published in the German language. It is impossible for a mathematician to work to advantage without being able to consult the 'Jahrbuch für Mathematik.' It is impossible for physicists to work without consulting the 'Fortschritte der Physik'; 'Science Abstracts' are not sufficient. And so it is in many other fields of science."

Every cosmopolitan scientific man will be able to make many additions to this list. The "Minerva Jahrbuch" is the one and only first-rate international directory of scientists and scholars. The "Geographen-Kalender" is indispensable within the field of geography and contiguous sciences. No British or French atlas approaches Stieler's in workmanship and accuracy. But the list is endless.

The business of making scientific discoveries is one thing; the business of recording them, summarizing them, rendering knowledge of them available, is quite another. In this latter field Germany has had no serious rival; and at the present writing no other nation manifests any serious intention of taking her place.

The workings of competition will not long be hampered by sentimental considerations. Unless non-Germans can produce as good dyes and drugs, textbooks and reference books as those made in Germany, we shall inevitably lapse into economic and intellectual subjection to the Germans. It will not help the situation to harp upon irrelevancies.

German monopolies have not been good for the world at large, nor, indeed, for Germany herself. Her commercial monopolies have been shattered by the war. Whether they can ever be re-established is problematical. The particular kinds of intellectual monopoly of which we are writing can only be said to be in abeyance. We hear that British and American manufacturers have solved the dye problem and the glass problem. We do not hear that any publisher has produced an American equivalent of Stieler's "Hand-Atlas" or a British equivalent of Winkelmann's "Handbuch."

Let us hope for the best. The English-speaking world is more populous than the German-speaking world, and the English language, with its Germanic base and its Latin superstructure, is particularly well qualified to become the international language of science. These are excellent reasons why books indispensable to students and scholars should be printed in English rather than in German.—SCIENTIFIC AMERICAN.

What the instructors and alumni of the Institute of Technology have done towards the winning of the war no one can reckon up; but everybody knows that next to moral heroism it was expert engineering on land and sea that brought the Allies victory. From the perfecting of gas masks to ship design, from devising faster machinery for munition works to framing new formulas in the mechanics of flying, the demands of the war have drawn Tech men into skilled work for every division of the service. President MacLaurin himself has been in charge of the educational committee that co-operated with the war department in establishing and overseeing the S. A. T. C. And while officers and graduates by hundreds have thus been helping the nation, the Institute has not only quickened its regular work but has taken under its care half a dozen schools for the training of men and women for special war-time uses.

But now, as the Institution turns again to its normal duties for the community, it finds that its mid-year enrollment is embarrassingly large and that its prospective enrollment for the coming year is much heavier still. This surprising press of students has not resulted from any lowering of standards or "widening" of entrance requirements; on the contrary, young Americans are resorting to the Institute for the same reason that young men have been coming from Russia and China and Japan—because from this Massachusetts institution they can get instruction as severe and thorough as the tests which they must later face in practice.

This increase of students means a disproportionate increase of outlay, for on the average each student costs at least three times what he pays. And Garfield's definition of a college, as a log with a Mark Hopkins at one end and a student at the other, could never fit a school for the training of engineers and chemists. Modern equipment for the teaching of chemistry, say, and physics and the other sciences on which our industries must lean, costs far more nowadays than the public would suppose.

In this situation the Institute must appeal to its friends at large. Even if the Commonwealth keeps its faith, and construing its accepted promise as a "contract" within the meaning of the anti-aid amendment to the state constitution, makes the three remaining \$100,000 payments on its ten-year subsidy, this aid has already been counted on and absorbed in the plans for the recent expansion in which the Commonwealth became, as it were, an interested partner. As for the "McKay millions," such co-operation with Harvard as was hoped for five years ago has been pronounced by the Supreme Court inconsistent with the terms of the trust.

If the public once understands how the Institute has not only helped win the war, but in years of peace has sent the name of Massachusetts through the Union and around the world more widely than the old clipper ships of Boston ever carried it, and how seriously the school needs money now to do its work as its work should be done, without overcrowding the laboratories or excluding worthy students, assistance will be generous and prompt.—BOSTON HERALD.

These are remarkable figures which the Massachusetts Institute of Technology has published concerning its present enrollment. In most of the American institutions of collegiate grade the attendance, at this early stage of the transition from war to peace, is only from one-half to two-thirds of the normal. Tech as a Magnet With the disbandment of the S. A. T. C., the average American college has not yet had time to recruit a new undergraduate body of the size customary before the war. Not so at the great school of applied science in Cambridge! Not only has Technology retained more than the average share of its former S. A. T. C. enlistment, but also it has admitted a large influx of new candidates for degrees. The freshman class alone has eight hundred and sixty-four students, as against an attendance which never rose higher, in the years before the war, than five hundred and twenty-four. This excess is so large that it not only offsets the almost total absence of seniors from Technology's present enrollment, and also of its usual quota of graduate students, but actually raises the whole number to a slightly higher figure than it had reached in the years before the war. For the year 1915-1916 Massachusetts Institute of Technology had nineteen hundred students. Today it has nineteen hundred and eighty-six.

What is the explanation of so signal a popularity? Is it simply an index to the general movement of students into the technical schools which we have been taught to expect would be consequent upon the war, or is it a particular reflection of Tech-

nology's drawing power today, over and above the attraction exerted by other schools of the same kind? Probably it is both. The quest for scientific training has lately been much stimulated, and at the same time the name and fame of the Massachusetts Institute of Technology have gained new luster in the splendid plant that has been built on the Charles. If these combined attractions continue to swell the Institute's enrollment at the rate which has lately obtained, qualified persons estimate that it will soon show a student body of three thousand members.

Leaving out of account all broader questions raised by such an evidence of the modern trend toward technical training, it is possible to say that the prospect of an enrollment of three thousand students possesses some difficult questions even within the confines of Technology itself, for the authorities to think upon and determine. The type of education which the Institute has so successfully developed calls for great laboratories and for a far larger "space per student" than is customary in a cultural college. The fine buildings finished just before the war are already crowded and will soon be overcrowded. Some relief, it is true, will soon be secured by the erection of the Pratt School of Naval Architecture. It has been delayed by the war, but it will go forward promptly next spring. This, however, is but a slight contribution to the solution of the problem presented, because the space now set aside for students in naval architecture is not extensive. What is Technology to do? Arbitrarily to limit her numbers or still further to extend her buildings? Either alternative presents serious objections. The construction and maintenance of ever more and more buildings is a costly business in these days. Restrictions upon the total number of students are often detrimental in their effect. And still, difficult though the issue may seem, it appears impossible that an institution which is showing today such tremendous vitality can fail to find in the future paths and means of development that will lead not toward stagnation but toward ever greater and greater fruition.

—BOSTON TRANSCRIPT.

A WORLD'S FAIR AT M. I. T.

THE long wanted project for a Boston exposition to celebrate the landing of the Pilgrims, abandoned reluctantly because of the war, has been revived again, with the idea of combining it with a world's fair in celebration of peace, to be held, perhaps, in 1922.

Among the many suggestions for a proper site for the exposition, the most favorably received seems to be the Cambridge side of the Charles River, near the new Technology. This would doubtless involve utilizing the Institute's buildings as an integral part of the exposition.

IN THE PUBLIC EYE

JOHN S. BLEECKER, '98, manager operating companies for Stone & Webster at Columbus, Ga., which include the Columbus Railroad, has been appointed general manager of the New Orleans Railway & Light Company by J. D. O'Keefe, receiver of that company. This is a new office with the company at New Orleans. All of the present departmental heads of the corporation will, it is announced, continue with the company, Mr. Bleecker assuming general charge of operation under Mr. O'Keefe. As at present organized, the company has separate managers for its railway and light departments. Mr. Bleecker has long been connected with Stone & Webster. He was born in Washington, D. C., on April 8, 1878, and was graduated from the Massachusetts Institute of Technology in 1898. He was employed in the mechanical department of the American Bell Telephone Company at Boston immediately after graduation and remained with that company until 1900, when he entered the service of the Stone & Webster Engineering Corporation. In the interests of this large holding system he has filled various positions at Boston, Seattle, Houghton, Blue Hill, Paducah and Columbus, the duties covering a very wide range of activity.

WILLIAM RAWSON COLLIER, '00, sales manager of the Georgia Railway and Power Company, Atlanta, Ga., has been appointed operating manager of the electrical department of the company in addition to his duties as sales manager. Upon graduation from the Massachusetts Institute of Technology, Collier entered the consulting engineering field as junior member of the firm of Collier & Browne. In 1902 he entered the service of the Georgia Railway and Power Company in charge of the drafting department. Four years later he was appointed contract agent, resigning in 1907 to become manager of the Electric Manufacturing and Equipment Company. Upon the dissolution of this company he became associated with the B-R Electric Company as engineer, which position he held until the formation of the present Georgia Railway and Power Company, when he was appointed sales manager. In addition he became sales manager of the Atlanta Gas Light Company, manager of the Carrollton Electric Company and manager of the Suburban Gas and Electric Company, holding these two latter positions until the companies were merged with the parent organization.

WINTHROP COFFIN, '90, of Brookline, member of the banking firm of Coffin & Burr, has been appointed by Governor Coolidge as the successor to Galen L. Stone, who resigned several days ago as a trustee of the Boston Elevated Railway.

Mr. Coffin is a graduate of Technology, a director of the United Electric Securities Company, Greenfield Electric Light and Power Company, Fitchburg Gas and Electric Light Company, and the Boulevard Trust Company.

It was a Boston man, HENRY HOWARD, '89, who, more than a year and a half ago, foresaw the absolute and immediate necessity of providing a complete recruiting service for the new United States merchant marine, which then was in the very first stages of its inception. It would be useless, Howard saw, to try and build a great armada of cargo ships and transports without making definite provision for the securing and for the proper training of men who could be qualified to

operate them from the very moment that they were accepted from the hands of the shipbuilders.

In the half-century decline of the American merchant marine there had been even more than a proportionate decline in American sailormen. Of course, there would be a sizable quantity of men to be secured from the land, who at some earlier time in their lives had had a sufficient sea experience to make them at once fit officers or sailors, or with a minimum of training. The extensive cargo fleets of the Great Lakes—idle for fully five months of the year—might also be drawn upon. But these two sources, taken together, could hardly be counted upon to furnish more than from a fifth to a quarter of the necessary seamen for such a fleet as the United States Shipping Board had in mind almost from the very beginning in January, 1917.

So it was that the trained executive mind of Henry Howard of Boston set about to devise a definite plan for meeting this particular great need of man power. His study of the problem was rendered much easier by the fact that with him the love of the sea is inborn. It is his recreation and his hobby.

At the end of May, 1917, Mr. Hurley, who then had come to be chairman of the United States Shipping Board, quickly accepted Mr. Howard's plan to enroll and train sailors and officers for the new merchant marine, appointed him director of the Recruiting Service and gave him headquarters in the tall new tower of the Custom House in Boston. Within twenty-four hours after his appointment Howard was hard at work on the job, drafting his organization personnel and preparing to open the first of the engineering and navigation schools. And because of the fact that he had spent so much study on his plan even before taking it down to Washington he was enabled to work with great rapidity.

Before the summer of 1917 was anywhere near over he was graduating from his schools and training stations students who already were being given a short apprentice training on coastal and South American routes before being given full jobs and full responsibilities upon our growing roster of merchant ships.—EDWARD HUNGERFORD in "Collier's Weekly."

MARSHALL O. LEIGHTON, '96, consulting engineer of Washington, D. C., has been chosen as chairman of the newly formed national service committee of the Engineering Council. Mr. Leighton, who has made a particular study of the hydro-electric development of this country, was one of those who testified before the congressional committee on the possible commercial development of navigable rivers and streams in forest preserves, indicating also to what extent canalization of navigable streams would result in improvements to navigation, as well as in water-power possibilities. He has made a study of the application of water power to many uses, including industry, central stations, electrochemistry, and especially railroad electrification. Mr. Leighton was born in 1874. He was graduated from the Massachusetts Institute of Technology in 1896. He engaged chiefly in hydraulic work and in 1906 was appointed chief hydrographer of the Geological Survey. He continued in this work until 1913, when he took up consulting work. He has been a member of a number of government commissions to study waterways and hydraulic possibilities.

FREDERICK P. ROYCE, '90, has been appointed general manager for the receiver of the Brooklyn Rapid Transit Company.

He had acted in a managerial capacity in connection with several railroads, none of them hereabouts. He felt because of the court relationship to the B. R. T.

unwilling to discuss that part of his career until he learned how much more Judge Garrison intended announcing.

Royce was graduated from the Institute of Technology in 1890. He is vice-president of the Stone & Webster Management Association and a director of the American Pneumatic Service Company, Lamson Consolidated Store Service Company, Boston Woven Hose and Rubber Company, Concord (Mass.) Electric Company, Paducah Traction and Light Company, Houghton County Electric Light Company, Blackstone Valley Gas and Electric Company, Haverhill Gas Light Company, Fall River Gas Works Company, Connecticut River Power Company. He is a member of the American Academy of Political and Social Science.

PROFESSOR GEORGE E. RUSSELL, '00, of the department of Civil Engineering, is to be president and general superintendent of the Junior Plattsburg Camp. This institution was established during the war to furnish a military training to young men of an age below the limit that would insure their admission to Plattsburg. With the cessation of the war there was no longer need for such a camp in its military sphere of usefulness, which might perhaps be termed a feeder to Plattsburg, so its projectors have made of it a great military summer camp, with its drill supplemented by regular studies. In this there will be introduced engineering features, and in seeking a director the choice fell on Professor Russell, who is already hard at work on the plans for next season's work.

Professor Russell is a Boston boy, a graduate of Technology in the class of 1900, and for eighteen years engaged in the teaching of engineering. After a brief experience as instructor at Technology immediately on graduation, his next position was that of structural engineer and designer in the steel car plant of the American Car and Foundry Co. of Detroit. Shortly afterwards he was called to Cornell to the Civil Engineering College and after a year, he returned to the instructing force of the Institute, where he has enjoyed successive promotions till for the past few years he has been Associate Professor of Hydraulic Engineering and Director of the Hydraulic Laboratories. The splendid layout in hydraulics at the Institute, without its peer in the world, was his work. As a consulting engineer Professor Russell has been constantly in demand in the lines of his profession and at different times he has been associated with state and municipal commissions.

Another experience in connection with the Institute fits Professor Russell especially well for his new summer work, for at the Institute summer Civil Engineering camp at East Machias, Me., he has for a number of years been resident manager. On every side, therefore, as teacher as well as camp director, he is especially well fitted for the management of the Junior Plattsburg, while, hailing from Technology, there will be no question as to the quality of instruction that will be given under his direction. He will be no stranger to his new duties for, setting aside his experience as commandant of the camp at East Machias, he has a record of eleven years' connection with military organizations of the state of Massachusetts in various capacities. He has had, furthermore, an inside view of the problem attending the education of young men and boys through an intimate acquaintance with the work of the Home and School Association of Boston, of which he was for three years a local president.

Professor Russell will retain his connections with the Institute, but is relinquishing his outside professional engagement in consultations for this educational work, the activities of which will be largely in the summer season.

MAJOR CARROLL H. SHAW, '10, Engineers, U. S. A., who was the officer in charge of the New England district of the power section of the War Industries

Board, is now engaged in the preparation of a report on the power requirements and resources of New England as a unit, which is to be submitted to the War Department to furnish a basis for any future conservation that may be required. He was born at Abington, Mass., and was graduated in 1910 in the electrical engineering course from the Massachusetts Institute of Technology. His professional experience began in the Engineering Department of the National Electric Lamp Association at Cleveland, Ohio, where he was employed for about four years. In this organization he was occupied largely with engineering associated with the commercial phases of industrial illumination and street lighting, with extensive field work in the Middle West and the East. In October, 1914, he was appointed electrical engineer of the Sheboygan (Wis.) Railway and Electric Company, now the Eastern Wisconsin Electric Company. This post also covered operating service as superintendent of light and power, in charge of overhead distribution and station electrical engineering. In April, 1917, he became engineer and soon after manager of the Minnesota Utilities Company, Eveleth, Minn., operating in the Mesaba Iron Range district. Major Shaw in June, 1917, received a commission as captain in the Engineer Reserve Corps, later being ordered to report for instruction at Camp Lee, Petersburg, Va. In February, 1918, he was ordered to Washington and was detailed by the Chief of Engineers to duty with the power section of the War Industries Board, with headquarters at Washington. Since then Major Shaw has traveled more than 25,000 miles in the Central, North Central and New England States in power-conservation service, performing special work in power utilization at Cleveland, Ohio, Harrisburg, York, York Haven and Erie, Pa., and Utica, N. Y. On August 20, 1918, he was ordered to Boston as officer in charge of this work in the New England district. He was commissioned major of engineers in October, 1918.

A new corporation, probably bearing the title of the International General Electric Company, will be formed as a subsidiary of the General Electric Company to develop foreign trade. GERARD SWOPE, '95, has resigned as vice-president of the Western Electric Company to become the president of the new organization.

Swope, who is announced as the president of the new company, was graduated from the Massachusetts Institute of Technology in 1895 and in the same year entered the employ of the Western Electric Company at Chicago. After spending a year in various departments of the shops he became designing engineer in the power apparatus engineering department. In January, 1901, he organized the St. Louis branch and was its first manager. He was transferred to Chicago in 1906 as power apparatus manager. Two years later he was made general sales manager with headquarters in New York. He was elected vice-president in 1913.

COLONEL WILLIAM H. WALKER. — The great war enlisted the services of almost every branch of science, and many a technical expert found himself called from a life of study or teaching to a place in the cohorts of Mars. One such man, to whom there fell work of special interest and importance, was William H. Walker, professor of chemical engineering at the Massachusetts Institute of Technology, later colonel in the United States army, and chief official manufacturer of lethal gases.

Colonel Walker was one of the first recruits to the board of chemists commissioned by the government to deal with the problems rising out of the introduction of poison gas in warfare. It was soon found that the only effective method of handling the situation was to produce sufficient quantities of the deadly stuff to make it

possible for the Allies to outdo the German in his own specialty. Prior to this war poison gases had never been manufactured in bulk. The task had been a new one, even to Germany.

England and France had already begun the manufacture of phosgen and mustard gas, and had produced them on a scale comparable with that of the enemy. The American problem was to bring to bear our unique facilities for quantity production, and by so doing to set a new standard in gas warfare. It was decided that an arsenal should be built and devoted exclusively to this purpose. Since it was desirable to keep the scheme secret as far as possible, an isolated region in Maryland, bordering on the Atlantic, was selected, and there, in the early months of 1918, were set up the various units of a great industrial establishment which was to produce such quantities of man-killing poisons as the world had never dreamed of.

Scientific men knew the theories for producing these poisonous gases—knew how it had been done in the laboratory; but their manufacture in hundreds and thousands of tons, and the handling of these great quantities after being manufactured, involved entirely new problems. In building such a plant it became necessary that the reaction in a test-tube should be reproduced on the scale of an industry occupying scores of buildings and scattered over hundreds of acres of ground. The men of science, with their formulas carefully worked out, called in the most experienced and best-proved executives that the nation could furnish, and set them to making theory into reality.

So did a plant come into being which, at the signing of the armistice, was producing more poison gas than all of the rest of the world combined.

Few people probably appreciate the fact that the principal basis of the new terror that has been added to warfare is nothing more than everyday table salt. Table salt, in science, is sodium chlorid, and the first process in the manufacture of practically all the poisonous gases is to separate the chlorin from the sodium. The greatest of the units at Edgewood Arsenal is the chlorin plant. Water is saturated with salt, and electricity is sent through the brine solution at a high voltage. The chlorin is freed and carried away in pipes, as a gas; the sodium is salvaged in solid form and made available for industrial use.

The chlorin so secured is the identical yellowish-green gas which the Germans first unleashed at Ypres in April, 1915, and which rolled down upon the French Colonials and the Canadians, taking a heavy toll of lives. With a little scientific juggling it became the still more deadly phosgen of the later attacks, and it is one of the chief elements entering into the manufacture of mustard gas, the most dangerous of them all.

When the armistice came, America was prepared to dominate the military situation in so far as it depended on the use of gas. By spring we should have been turning out ten times as much phosgen and mustard gas as Germany could produce, and should have been prepared to deluge the enemy with a veritable avalanche of destruction. Colonel Walker, who in rare degree combines scientific erudition with executive ability, had performed one of the most remarkable tasks of the war.—
MUNSEY'S MAGAZINE.

NEWS OF ALUMNI ASSOCIATIONS

CHARLESTON—TECHNOLOGY CLUB OF WEST VIRGINIA.—Meetings have been held on the third Saturday of every month since our organization last May.

The September meeting took the form of an outing on the Kanawha River. Supper was cooked (Mayo Tolman, '13, chief cook) and then wood was added to the fire until it was a real fire. The fifteen of us present sat until a late hour talking and thinking of Tech. Finally we journeyed back the four miles down the Kanawha under a full moon. At this meeting, Mrs. Mayo Tolman (Ruth Dunbar) '11, was made an honorary member.

The February meeting was made "ladies' night." Twenty-six were present at the Edgewood Country Club for dinner, after which, Mayo Tolman, '13, member of the American Red Cross Relief Commission to Guatemala after the earthquake, gave a talk on "The American Red Cross in Guatemala," illustrated by many remarkable photographic slides and a full reel of motion pictures. The talk, from the very nature of it and the speaker's first-hand experience, was bound to be good, but with these was coupled Mr. Tolman's unique ability to intersperse stories of odd events he had witnessed and stories of native life in Guatemala, told in his own inimitable manner.

We urge all Tech men in West Virginia to get in touch with the secretary, and get on our list for notices of meetings. The dinners and meetings are now held at the Edgewood Country Club instead of the Hotel Kanawha, the third Saturday in each month at 7.30 P.M. The annual meeting and dinner will be in May and we would like to have every Tech man in the state present.—JAMES B. PIERCE, JR., '11, Secretary, Box 932, Charleston, W. Va.

CINCINNATI M. I. T. CLUB.—At the annual meeting of the Cincinnati M. I. T. Club, held January 25, 1919, the following officers were elected for the ensuing year: President, Rudolph Tietig, '98; vice-president, Nathan Ransohoff, '10; secretary, John M. Hargrave, '12, care Cincinnati Tool Co., Cincinnati, Ohio; treasurer, David Davis, '97; directors, C. R. Bragdon, '07, W. C. Folsom, '08, F. W. Morrill, '07. The meeting brought some thirty-five alumni together from this vicinity. The annual bowling tournament held after our dinner and business meeting showed that notwithstanding the strain of the past year and the approach of prohibition, our star bowlers are still able to keep the pin boys busy. Kruckemeyer, '11, had a winning team, averaging six hundred for six men, but Rapp, '00, and Tietig, '98, were close behind. It is strange that architects make such good bowlers. Folsom, '08, who runs our local health department, was the most consistent man, scoring one hundred and forty game after game until the lights were turned off. If any of the nearby Alumni Associations want a run for their money, we will be glad to take them on.

Lieut. E. R. Jackson, '10, Ordnance Department, who wants to be known as "Doc," was transferred last fall from this district to Dayton, Ohio. We are glad to learn that his work there has been finished and he will soon return to this district.

C. R. Woodward, '12, stopped in to lunch with us recently. He is on an inspecting tour for the Factory Mutual Insurance Company of New York. It is not quite certain what he is inspecting.

Lieut. Charles F. Cellarius, A. E. F., '16, our local ex-secretary who was until recently with a machine gun company, has been transferred to the Fine Arts Department of the Army Educational Commission, working under the Young Men's Christian Association in Paris. This, he says, is a sort of army university which is to use some of the spare time which the overseas men now have on their hands. He is fortunate in the change as it will give him an opportunity to continue his study in architecture.

H. D. Loring, '06, who is with the Ferro Concrete Construction Company, recently addressed a meeting of constructing engineers in Rochester, N. Y., on salesmanship. He had just landed an order for a large building for the Eastman Company.

A. H. Pugh, Jr., '97, who has been handling the gas and chemical affairs of the Local District Ordnance Office, has returned to his peace-time proposition of printing seven-color jobs and railroad tickets.

Sergt. Charles R. Strong, '11, at last report was still in England, directing sheds and barracks with the Air Construction Division. He expects to return soon, however, to build houses with his former partner, E. H. Kruckemeyer, '11.

The Cincinnati M. I. T. Club is still holding Tuesday luncheons at Schuler's, 626 Vine Street, at 12.30 P.M. If you are in Cincinnati at that time, we will all be glad to have you join us there.—JOHN M. HARGRAVE, '12, Secretary, care The Cincinnati Tool Company, Cincinnati, Ohio.

DETROIT TECHNOLOGY ASSOCIATION.—Referring to your circular letter of March 1, in regard to news items for the REVIEW, the affairs of the Detroit Technology Association have been rather quiet during the year 1918, on account of many active members of our Association being in war work.

R. Floyd, '15, has been lieutenant in air service as a flying instructor in Texas. He is now back with his father, F. H. Floyd Oil Company, Detroit.

Marion Gorham, '93, who has been inspector in air craft production, has now moved to Buffalo, where he is permanently located in business.

William A. Houser, '15, is back again from the army and is with the Cadillac Motor Company.

William R. Kales, '93, is captain in air service, 4th Air Park of 3d Army in Coblenz, Germany. He is having all sorts of experiences from flying to chasing cooties and acting as judge of court martial. He is having a great time looking up the history of the country. He has lost a great deal in weight, but is well and happy.

E. B. Snow, Jr., '05, Lieutenant Signal Corps, has had charge of inspection of Liberty motor production at the Lincoln Motor Company plant.

A. F. Shattuck, '91, formerly chief chemist of Solvay Plant here, has had to move to California for his health.

Granger Whitney, '87, has been in charge of coke prices in fuel administration at Washington. He has returned and will later go to his farm at Williamsburg, Mich.

H. T. Winchester, '03, is still at Hog Island Shipyard.

Allen Loomis, '99, is still in Dayton, Ohio, with Air Service.

Harold W. Barker, '14, left here as lieutenant in Engineering Corps.

P. C. Baker, '16, is lieutenant in Aero Squadron, A. E. F.

R. F. Hill, '10, is lieutenant of ordnance, Rochester, N. Y. We are sorry to learn that Roger's wife died this last year.

O. W. Albee, '93, is Colonel Albee now, in charge of Ordnance Department, U. S. A., in Canada, with headquarters at Toronto. He has had a real big job for some time, having had twenty-five hundred inspectors.

George R. Anthony, '98, is just out after an operation for appendicitis.

Maurice Black, '96, died this winter.

George R. Cooke, '07, is real busy now with large jobs, among them the 3d Street sewer in Detroit.

Oliver M. Davis, '01, is with Whitehead & Kales Iron Works, Detroit.

E. M. Elliott, '06, is with the Diamond Power Specialty Company.

J. R. Marvin, '02, has moved to New York.

H. O. Page, '06, died December 1, 1918. I have not learned any of the particulars.

Waldeman S. Richmond, '05, of United States Engineers' Office, is transferred to Buffalo.

The regular monthly luncheon was held at the Board of Commerce, March 5, at 12.30 o'clock. We were pleased to have Lieut. W. H. Leathers, O. D., U. S. A., '14, with us at the luncheon.

Mr. Walter O. Adams joined us for the first time. Adams now has office at No. 1038 Dime Bank Building.

Granger Whitney, '87, spoke to us on his experiences in fuel administration.

The annual meeting of the Detroit Association was held at the University Club, March 12, at 6.30 P.M. Dinner. President D. V. Williamson, '10. Mr. Horace Esselstyn, Commissioner of Public Works, Detroit, talked to us on the Hog Island Shipyard. Esselstyn was resident engineer at this yard during 1918 and gave a great talk, defending the yard and its builders. A photograph twelve feet long was shown to illustrate the talk.

The secretary read a letter from William R. Kales, '92, captain in Air Service, Army of Occupation, Coblenz, Germany. Lieut. F. H. Floyd, '15, Air Service, then talked about his experiences as flying instructor at the Texas flying field. "Slim" says that flying is just as safe as walking and a lot quicker.

Officers elected for 1919 are: President, George D. Huntington, '98; vice-president, Frank H. Davis, '04; treasurer, M. S. Dennett, '11; secretary, Joseph N. French, '11, 2098 Woodward Avenue, Detroit, Mich.

There were thirty-one present at the dinner: H. S. Esselstyn, Harmon Wendell, '91; Kenneth Greenleaf, '11; W. A. Houser, '15; Frank H. Davis, '04; George Huntington; L. E. Williams, '02; George V. Pottle, '01; Frank R. Cooke, '96; J. W. French, '11; George Anthony, '98; Colonel Gibbons, U. S. A.; M. S. Dennett, '11; D. V. Williamson, '10; R. Floyd, '15; E. B. Cooper, '05; H. W. Brown; H. Day; George R. Cooke, '07; Charles T. Hammond, '91; E. A. McGonigle, '96; G. W. Carpenter, '00; Fred Sutter, '93; C. Lang, '04; Howard Currier, '13; Walter O. Adams; Granger Whitney; O. M. Davis, '01; D. H. Mayo, '14; Lewis Davis, '12; Charles T. Fuller, '12.—FRANK H. DAVIS, '04, Vice-President.

MANCHESTER—THE TECHNOLOGY CLUB OF NEW HAMPSHIRE held its annual meeting February 28 in the club rooms of the W. H. McElwain Company's Plant at Manchester, N. H., where a very pleasing banquet was served in accordance with the McElwains' efficiency methods. After the dinner the annual election of officers was held and those chosen for the following year were:

President, E. W. Rollins, '71, of Dover, N. H.; vice-president, Norwin S. Bean, '94, of Manchester, N. H.; secretary and treasurer and representative of the Alumni Council, Walter D. Davol, '06, of Manchester, N. H.

A motion for a vote of thanks to President E. W. Rollins for the glorious entertainment given the Club last summer and for his invitation to again be with him next summer was introduced by John Chase, '74, of Derry, N. H., seconded by Harold A. Smith, '08, of Manchester, N. H., and passed on unanimously.

Later we were addressed by Lieut. Leigh S. Hall, '14, of Concord, N. H., on his

experience in the Construction Department of the United States Naval Aviation Service and by Clarence D. Hanscom, '17, on "Aeronautical Development."

NEW BEDFORD—THE TECHNOLOGY CLUB OF NEW BEDFORD.—The club gathered at the Wamsutta Club at dinner on Thursday night, March 13, to hear Van Rensselaer Lansingh tell of his experiences at the University Union and at the front in France. Twenty members enjoyed a pleasant evening listening to Lansingh's genial talk.—CHARLES F. WING, JR., Secretary, '98, 36 Purchase Street, New Bedford, Mass.

NEW HAVEN—NEW HAVEN COUNTY TECHNOLOGY CLUB.—A general get-together meeting was held at the New Haven Lawn Club on Saturday evening, January 18. Thirty-eight men were present for dinner. President C. E.-A. Winslow announced that the annual banquet would be held on Saturday, March 29, and that he had been fortunate in securing Dr. Dewey and Mr. Lansingh to speak about their war work. After dinner teams were formed and a fast and spirited bowling contest was marshalled by Herbert Wilcox as master of ceremonies. Quite a number of men came from Waterbury and several from near-by towns of Derby, Naugatuck and Cheshire.

The following men were present: C. E.-A. Winslow, E. W. Rutherford, Alden Merrill, John Tetlow, Lawrence Wetmore, W. H. Whitcomb, E. A. Teeson, E. O. Upham, E. W. Taft, H. A. Morrison, H. G. Shaw, W. T. Dorrance, Charles W. Brown, C. T. Dunn, B. H. Aldridge, Fred W. Lane, Lucius Bigelow, R. L. Parsell, George Nichols, C. D. Dunlap, J. C. Bradley, H. L. Morgan, I. M. Guilford, J. S. Gravely, F. H. Pierce, Edwin Pugsley, F. G. Smith, T. C. Merriman, W. H. Bassett, Kenneth Cartwright, C. F. Suhr, J. R. Putnam, L. H. Marshall, F. P. O'Hara, A. T. Hopkins, H. M. Wilcox.—ROY L. PARSELL, Secretary, New Haven County Technology Club.

NIAGARA FALLS TECHNOLOGY CLUB.—A meeting was held on March 14, at the Niagara Club, and sixteen members were present. After the feed was over, a list was passed and all recorded their bowling ability. Four teams were made up from that data. The Arlingtons—Messrs. H. L. Noyes, F. H. Dunnington, W. N. Flanders and R. E. Gegenheimer. The Beacons—Messrs. P. E. Blood, R. H. White, E. H. Mangan and H. V. Atwell. The Commonwealths—Messrs. E. T. Pollard, A. P. Sullivan, P. G. Savage and E. L. Hauman. The Dovers—Messrs. Paul Hooker, J. H. Critchett, W. C. Read and N. Duffett.

Fines were imposed on any man bowling out of his class as indicated by previously recorded ability.

The Dovers were winners of first money, with score 1405, Arlingtons second with 1321, Commonwealths 1304 and Beacons 1243.

The singing was led by President Pollard. Plans were discussed for a dance to be held in the near future.—N. DUFFETT, '11, Secretary, care Union Carbide Company, Niagara Falls, N. Y.

PHILADELPHIA—TECHNOLOGY CLUB OF PHILADELPHIA.—I enclose a list of the new officers of the Technology Club of Philadelphia, elected at the annual meeting on April 2, 1919: President, Percy E. Tillson, '06; vice-president, C. J. Walton, '14; secretary, M. B. Dalton, '15, Liberty Mutual Insurance Co., 22 South 15th Street, Philadelphia, Pa.; assistant secretary, F. R. Foster, '15; Executive Committee, officers ex-officio, C. E. Patch, '02, C. D. Davis, '12, E. P. Trask, '99, C. A. Anderson, '05, D. K. Bullens, '09.

I also enclose a list of the meetings which have been held during the past year:

May 1, 1918, subject, Hog Island, Mr. C. C. Allen and Mr. H. W. Osgood, speakers.

June 8, 1918, 11th Annual Field Day at Woodbury Country Club.

October 2, 1918, subject, Accident Prevention, Mr. M. B. Dalton, '15, speaker.

November 6, 1918, subject, Technology Men in the Naval Aircraft Factory, Commander F. G. Coburn, United States navy, speaker.

December 4, 1918, subject, The Storage Battery in War and Peace, Mr. J. Lester Woodbridge, speaker.

January 7, 1919, subject, The Design of Artillery Ammunition, Mr. J. W. Taylor, '05, speaker.

February 5, 1919, subject, Ship Design, Mr. E. P. Trask, '99, speaker.

March 5, 1919, subject, Heat Treatment of Steel for Ordnance Work, Mr. D. K. Bullens, '08, speaker.

April 2, 1919, subject, Photo-Engraving, Mr. Charles A. Stinson, speaker.

The next meeting will be on May 7, 1919, and Dr. Hollis Godfrey, '98, president of the Drexel Institute, Philadelphia, will be the speaker. The annual field day will be held on Saturday, June 7, 1919, at the Woodbury (New Jersey) Country Club.—M. B. DALTON, '15, Secretary, 22 South 15th Street, Philadelphia, Pennsylvania.

ROCHESTER—THE TECHNOLOGY CLUB OF ROCHESTER—On December 11, the Club held its annual dinner and business meeting at the Rochester Club. As this date happened to be Frank Lovejoy's birthday, some of the fellows thought it would be good fun to pull a little surprise stunt. So after the regular dinner was over, the lights were turned out and a large, healthy looking birthday cake, brilliantly aglow with the proper number of candles, was ushered in and placed before Lovejoy, much to his amazement. During the hubbub of exclamations and yells of "Speech!" "Speech!" which followed, paper caps such as some of our "kiddies" have at festive affairs of this kind were passed around and were promptly donned by the usually staid and dignified "bunch." President Lomb then called upon Clarence Culver to make a few remarks fitting the happy occasion, whereupon Clarence produced an epic of his own composition, which he proceeded to read, much to the delight and amusement of every one.

After some further speechifying and rousing songs, we settled down to the business meeting, which was followed by a bowling contest on the Club alleys between the 'Pluggers' and the 'Sharks.' All of the 1918 officers were re-elected for the coming year and Clarence Culver was elected to act on the executive committee for three years in place of F. W. Lovejoy, whose term of office expired at this time.

Those present were: H. E. Akerly, '10; J. F. Ancona, '03; O. E. Conklin, '14; C. C. Culver, '96; J. C. Dryer, '99; B. W. Dow, '09; M. H. Eisenhart, '07; C. K. Flint, '01; J. H. Haste, '96; F. L. Higgins, '04; R. B. Jeffers, '09; V. E. Lacy, '01; Adolph Lomb, '92; F. W. Lovejoy, '94; F. B. Saegmuller, '04; H. O. Stewart, '09; A. A. Packard, '98; V. M. Palmer, '03; C. F. Wray, '95; Gerould Lane, '13; O. K. Foote, '80.

The members of the Club are very glad to welcome back to the city and to the Club J. Howard Cather, '12, who has recently been released from Service. At the time of discharge, he was serving as first lieutenant in the Engineers Corps, being assigned to Company C, 78th Engineers, at Camp Leach, District of Columbia.—V. M. PALMER, '03, Secretary, Eastman Kodak Company, Kodak Park Works, Rochester, New York.

SYRACUSE—M. I. T. CLUB OF CENTRAL NEW YORK.—Our regular monthly meeting of the M. I. T. Club of Central New York was held on the evening of January 16 at the University Club. Fifteen members were present.

Mr. W. E. Hopton, '92, purchasing agent of the Solvay Process Company, gave us a very interesting talk on the organization of this department.—J. S. BARNES, '08, Secretary, Merrell-Soule Company, Syracuse, N. Y.

NEW MEMBERS OF THE ALUMNI ASSOCIATION

The following were elected members of the Association by ballot:

Arthur John Eveland, '01
 Frank Hollis Appleton, '18
 Malcolm Johns Baber, '18
 Arthur Henry Barnes, '18
 Alexander Short Butler, '18
 Arthur Godfrey Carlson, '18
 Edward Sterling Carter, '18
 Enslo Smith Dixon, '18
 William Chapman Foster, '18
 Stanley Hamilton Franklin, '18
 Gardner Seabury Gould, '18
 Norman Ray Hamilton, '18
 John West Kilduff, '18
 Julian Tobey Leonard, '18
 William E. A. Lutz
 Paul Aloysius McGreenery, '18
 Herbert Louis McNary, '18
 Arthur Aloysius Obert, '18
 Frank George Osgood, '18
 Miss Gretchen A. Palmer, '18
 Frank Wagner Peers, '18
 Walter Richard C. Russert, '18
 Philo Sherwood Shelton, '18
 Willett Freer Searles, '18
 Edward Sidman, '18
 Malcolm Howard Smith, '18
 Henry Caldwell Stephens, '18

James Henry Sullivan, Jr., '18
 Samuel William Sweeney, '18
 Charles Howell Tavener, '18
 Harold William Trease, '18
 William Hugh Turner, '18
 Louis Franklin Van Zelm, '18
 Frederick Arthur Washburn, '18
 Franklin Henry Wells, '18
 Amory Leland Williams, '18
 Jacob Young, '18
 Henry Joseph Bruno, '19
 Lawrence Blair Cahill, Jr., '19
 Lester Van Deventer Chandler, '19
 Norman Douglas Conniers, '19
 Grant Dickson Green, Jr., '19
 Daniel Clifton Hall, '19
 Harold Edward Langley, '19
 Roger Maxwell Leland, '19
 Arthur Wendell Macfarland, '19
 Alan Henderson McIntosh, '19
 Paul Desnoyers Peltier, '19
 William Pinkney, Jr., '19
 Arklay Seymour Richards, '19
 Edgar Frank Karl Seifert, '19
 Marvin Mayfield Stetler, '19
 C. Raymond Sullivan, '19
 Phil Richmond Thompson, '19

BOOK REVIEWS

THE THEORY OF THE RELATIVITY OF MOTION, by Richard C. Tolman, University of California Press, Berkeley, Cal., 1917, IX+225 pages.

The theory of relativity in some form or other has permeated science and metaphysical thinking for a great many centuries. It has been assumed as obvious that any point of space was like any other point and that any direction in space was like any other direction. That is to say, that space was homogeneous and isotropic. It has been assumed that any point of time was like any other point. It was, therefore, the position in space or time and relative position in space or time that were regarded as fundamental ideas, howsoever convenient the idea of absolute space and time might be. One could go even farther. Velocity has long appeared to be a matter of relative rather than absolute velocity. The theory of relativity has received substantial modifications and amplifications in the last twenty years owing to an attempt to apply it to the electromagnetic theory. From the point of view of the older electricians such as Ampere and Weber, the older idea of relativity held by students of mechanics seemed a reasonably natural assumption to carry along into electricity, but from the point of view of Maxwell and the luminiferous ether whereby all space was conceived as filled with a medium fixed except for small oscillations about the mean position, the idea of a fixed basis, i. e., of an absolute space, was more natural. It has been shown, however, that the differential equations of the electromagnetic theory are unchanged when certain changes are made in the variables representing space and time. This was implied in the work by Lorentz, and the mathematical theory of the possible changes in space and time was given by Poincare. It was however the relatively elementary and bold hypotheses of Einstein which gave to physicists the keen interest in relativity as a physical theory and as a method of deriving important formulas. The theory of relativity has been much discussed because of certain philosophical points of view which seem to be correlated with it, the most fundamental of which is the idea that space and time are not independent but are related to one another so that two events which appear simultaneous to one observer may not appear simultaneous to another.

In this country contributions to the theory of relativity have been made by a number of physicists and of these Richard Tolman is one of the leaders. His book, therefore, represents not merely a digest of the work of others but is to a considerable extent an account of his own investigations.

The scope of the treatise may be indicated by quoting the titles of the chapters, namely:

I. Historical Development of Ideas as to the Nature of Space and Time. II. The Two Postulates of the Einstein Theory of Relativity. III. Some Elementary Deductions. IV. The Einstein Transformation Equations for Space and Time. V. Kinematical Applications. VI. The Dynamics of a Particle. VII. The Dynamics of a System of Particles. VIII. The Chaotic Motion of a System of Particles. IX. The Principle of Relativity and the Principle of Least Action. X. The Dynamics of Elastic Bodies. XI. The Dynamics of a Thermodynamic System. XII. Electromagnetic Theory. XIII. Four-Dimensional Analysis.

The Institute cannot fulfill its whole obligation to applied science unless it is strong in pure science. Some persons fear that the pressure for engineering education at the Institute will overwhelm any small stand for high attainments in pure science.

Richard Tolman is a product of the Institute—a graduate of Course X in 1903, and Doctor of Philosophy in 1910. Such men are rare necessarily, but so long as the Institute is represented in science by names like Hale, Noyes, Abbot, Coolidge, Tolman, there need be no fear.

EDWIN BIDWELL WILSON, Department of Physics.

FORMULA CHARTING—GRAPHICAL AND MECHANICAL COMPUTATION, by Joseph Lipka, Ph.D., Assistant Professor of Mathematics in the Massachusetts Institute of Technology. New York: John Wiley & Sons, Inc. London: Chapman & Hall, Ltd. Cloth. 6 x 9 in., pp. 264, illustrated; \$4.

The author of this volume has produced a treatise that is admirable not only for its clarity of diction and logical sequence of ideas, but also because it sets before the general scientist and the engineer principles and processes of the greatest practical utility, which heretofore have not been easily accessible in their entirety. Those who were interested have found it necessary to gather from scattered sources the matter here brought together in a form adapted to the use of practitioners as well as students.

The English bibliography of formula charting is decidedly limited; much of the discussion on methods of forming empirical curves to fit experimental data must be searched out in the proceedings of scientific societies and the contents of scientific periodicals here and abroad; and of the many explanations of the well known slide-rule principle but few contain any attempt to link up that principle with more general conceptions.

Professor Lipka has brought between two covers a well executed presentation of all these related subjects. It should not be understood from this statement that the book is merely a compilation, for it is decidedly not, in the usual sense. The author has summarized and correlated the work of many others, intermingling an amount of his own that is by no means negligible.

In the opening chapter are set forth the elementary principles of the representation of functions by scales, followed by the extension of these principles to include the so-called Mannheim slide rule, the log-log slide rule and others; after which the author proceeds to the graphical solution of equations containing two or more variables, and thence to the subject of nomographic or alignment charts. Probably there is at present no other work in English in which this subject is treated with equal comprehensiveness. Runge, it is true, has devoted some attention to it in his "Graphical Methods," but in so perfectly generalized a fashion that his reader may easily fail to see its true bearing; while the excellent work of Professor Peddle is more restricted in scope.

Professor Lipka's method resembles quite closely that of Maurice d'Ocagne. His underlying theorems are demonstrated in full, and his charts worked out to completion. To many they will be a surprising revelation of the possibilities of graphical methods in enabling one to avoid the drudgery of numerical computation.

The formulas selected for manipulation are typical ones, and similar methods may be applied readily to many others which will suggest themselves to the reader, as bearing on his particular kind of work.

In the highly enlightening chapters on the building of empirical formulas, the interpreting of experimental data and graphical interpolation, the author enunciates the criteria by which to determine the species of curve giving the best representation of a given set of data, and shows in detail, for a large number of actual experimentation reports, the practical processes of deriving such curves and evaluating their constants. The author's well considered order of presentation now becomes apparent,

for the reader will at this point realize that, however complicated may be the representative curve with which he has to deal, he is prepared to devise some form of chart by which its equation may be rapidly solved.

The final chapter contains a very lucid exposition of the principles of graphical and mechanical differentiation and integration, leading naturally to the description and analysis of the planimeter, the integrator and the differentiator with which the book closes.

At the end of each chapter are given problems, the solution of which will be of great benefit to students. The illustrations are numerous and well rendered, the typography is of a pleasing clearness. The index is proof that the author has not lost sight of the practical needs of the reader. The book deserves the highest success.

—ENGINEERING NEWS RECORD.

AERONAUTICAL ENGINEERING AND AIRPLANE DESIGN, by Lieut. Alexander Klemin. The Gardner-Moffat Co., Inc.

In this book there is no attempt at popular appeal. The general reader, if undaunted by its title, would surely be scared away by its tables, computations, and graphs. A knowledge of the fundamentals of aircraft is presupposed. The author undertakes to give in the first part a good presentation of aerodynamical theory and data, and in the second part a detailed discussion of airplane design, accompanied by innumerable diagrams and illustrations, and endless tables of values. The book is based on a series of articles in "Aviation and Aeronautical Engineering," of which Mr. Klemin was technical editor prior to his entering upon military service. Of the writer's ability and authority there can be no question. The type of thoroughness that has established the reputation of the Massachusetts Institute of Technology is apparent on every page; Mr. Klemin and Mr. Huff, his collaborator, have been associated with the Department of Aeronautics of that institution. The technical phases of the airplane are here treated comprehensively with a wealth of data that must render it valuable not only as a text for the student designer, but also as a trustworthy guide and reference to the experienced airplane engineer.—NEW YORK EVENING POST.

VALUE OF TANKS IN WARFARE.

LIEUT.-COL. HERBERT W. ALDEN, '93, II, assistant to the Chief of Ordnance, U. S. A., in charge of tank engineering work read an interesting paper on the army tank at the session of the annual convention of the Society of Automotive Engineers held in New York City on February 5. Colonel Alden, who is a former president of the society, said the main purpose of the tank, England's answer to trench warfare and the Hindenburg line, was to clean up machine gun nests by killing men, not by destroying forts. Speed and mobility, in his opinion, were the chief desiderata of this class of war engine. The necessity for these features, he said, made impracticable the type of heavily armored tank designed to withstand artillery fire.

"It is doubtful," Colonel Alden said, "if any new means of warfare has had so hard a time getting started and securing its just consideration as has the tank. Thanks, however, to its inherent worth, it is universally accepted as an indispensable arm of the service. The very urgent need which brought the tank into existence was the menace of the machine gun. This is the first war in which the machine gun was used in large numbers. This use in large numbers very nearly revolutionized warfare. Enough machine guns, properly placed, were almost impregnable. Behind barbed wire and in concrete redoubts, they could be taken only at a great sacrifice of man power—usually too great to be considered.

‘Something had to be done. The first method was that of intensive preliminary bombardment; that is, firing a stupendous quantity of shells into a given area. The prodigal use of shells for this purpose was staggering, running literally into the millions. Even this prodigal use of ammunition, however, would have been warranted if consistent results had been secured. But they were not. It was quite plain that something new had to come, and come it did in the form of the tank. Fundamentally the tank is simply a device that can come to close quarters with a machine gun and destroy it or its crew.

“It should be remembered that the tank is fundamentally a man killer and not a fort destroyer, also that its greatest defense against heavy artillery fire lies not in the armor it carries but in its own speed and mobility.”

After giving credit to the English for producing the first practical fighting machine of this type, particularly to Brigadier-General Swinton, Sir E. d'Eyncourt and Lieut-Col. Sir A. G. Stern, he described how the earliest experiments were hampered by lack of power, added to the fact that the military authorities did not understand how to use these new weapons. It was not until the fight at Cambrai in October, 1917, Colonel Alden said, that the tanks had their first real chance. Two interesting facts developed there, one being the saving of ammunition made possible, and second the manner in which the supposedly impregnable Hindenburg line was crossed and captured. The French decided that a large tank such as the English used would not give the best results, so a small two-man tank was developed, which proved very successful. When the American army entered the war it was decided to use both types.—ARMY AND NAVY JOURNAL, February 15, 1919.

A CORRECTION FROM PROFESSOR CROSS

“I note that in the list on page 28 of the January REVIEW, the name of C. R. Cross, Jr., is listed as in ‘Ambulance Service.’ Except in an unusually extended sense, this is incorrect, as he was engaged in Ambulance work (with the American Ambulance) for only a few weeks after his arrival in France; then transferring to the American Distributing Service, in which he remained thereafter, this connection being retained while he was in Serbia and Montenegro.

I would suggest that, following the form usual in the record, this should read ‘American Distributing Service. Died at Military Hospital No. 64, Dinard, France in consequence of an automobile accident.’ This could be abbreviated, though I do not think it is longer than others.

I am

Yours very sincerely,

CHARLES R. CROSS, '70.”

NEWS FROM THE CLASSES

1868

ROBERT H. RICHARDS, Secretary, 32 Eliot Street, Jamaica Plain, Mass.

The Secretary attended the meeting of the American Institute of Mining and Metallurgical Engineers in New York from February 17 to February 20, and while there met many Technology men who were attending the meeting. The list is as follows: J. P. Munroe, Bradley Stoughton, W. Spencer Hutchinson, A. H. Rogers, R. H. Richards, Adicks, Charles W. Goodale, Holbrook, Mossman, A. P. Watt, Burr A. Robinson, Corse, Wallace MacGregor, I. W. Litchfield, H. M. Howe, Burgess, B. E. McKechnie, Carney, Morris, Boyd Dudley, Merriweather, N. B. Patch, Hursh, Polhemus. We had a very good paper from J. P. Munroe discussing the labor situation and affairs at Washington. We also had a very good paper from I. W. Litchfield on the employment situation in which he is actively engaged in Washington.

The secretary and his wife and his wife's sister, Miss C. W. Jameson, are to sail March 21 for Savannah, Ga., and from there they go to Jacksonville, Fla., to spend a week more or less in thawing out the family colds, which have been very persistent and tiresome.

Mrs. Richards and I have been reading Thompson's "Brain and Personality," which is a wonderful book on psychology and tells us how the brain is trained to do its work, and tells us of tire poison and how to do the most work with safety. If, after each exertion one rests a little to allow the blood to carry away the poisons that are made by that exertion, one can do a great deal more and last a great deal longer. We also find many wonderfully interesting ideas in "Psychology and the Day's Work," by Swift, particularly Chapter V, on Fatigue and its Psychology.

We heard somewhere of an incident between a manager and his worker. I think he had been reading "Brain and Personality," and this is the story of the incident: The manager had a worker, a powerful man moving pig iron a short distance by hand, and he came to the man and said: "Would you like to earn more money?" The man said, "Sure, Sir." Then he asked if he was willing to do what he told him, and after some hesitation, he agreed. The previous condition was, the man had moved twelve tons a day and was all tired out and used up at night. He probably worked very hard for half an hour without giving his kinetoxins a chance to be washed out with blood after each exertion so that they accumulated the whole day, even though he put in what he thought was plenty of rest. The new scheme proposed was that he should work by the watch and after moving each pig of iron, he should rest just so long. At the end of the day the story is that he had moved forty tons of pig iron and when he went home at night he was fresh and gay as a lark and spent the evening hoeing his garden.

We, too, have had some fun gardening up in Randolph, N. H., where we have grown peas and beans and potatoes and other things, but the broken arches of my feet give me so much trouble that I cannot go out and work myself. We, too, had a woodchuck, but we disposed of him with a little twenty-two rifle before he had done any damage.

L. E. Nathaniel Walker Appleton writes from East Pepperell, Mass.:

I could not have been in Boston on December 19 as then I was busy chopping down trees for next year's firewood; even a man of my years, I find, can do hard and laborious work with success and a gain of health. I hope that all went off with pleasure and progression at the class of '68's fiftieth anniversary. Wonder where we all will be at the next fiftieth (or hundredth) anniversary. Belief in the hereafter is a strange thing — one person thinks one way and another, another way; we certainly will be free from care and anxiety or discomfort.

Last spring, after getting perhaps one-half acre or so ploughed and harrowed, personally and alone planted potatoes, corn, beans, etc. as the time came to sow, weeded by hoe or hand the above and destroyed the bugs. Harvested as things became ripe, those I did not eat at my little summer cottage, I sent down home. Potatoes, corn, peas and turnips very successful. Woodchucks and deer got into over two hundred eighty-five foot row of beans. After digging potatoes (I preferred to do all the work if possible alone) I began to chop down and put into cord wood various trees, collect brush into large piles — which piles (when eight or ten inches of snow on ground in December) I burned.

1870

CHARLES R. CROSS, 100 Upland Road, Brookline, Mass.

Our classmate, Frederick Brooks, died at the Massachusetts General Hospital on January 10, last, in consequence of burns received in the endeavor to extinguish a fire which had broken out in the upper portion of his residence. Though he was provided with a fire extinguisher the flames were too great to be subdued and enveloped his person, causing such severe injury that he survived only a few weeks. He leaves two brothers, Charles B. Brooks of Boston, at one time a student at the Institute and Morgan Brooks, professor of Electrical Engineering at the University of Illinois. Frederick Brooks never married.

Brooks graduated from Harvard College in 1868 where he had made a fine record in mathematics and thereupon entered the Institute to pursue the Course in Civil Engineering. As was then the case with most of those who were college graduates, he entered so far in advance that he was not well known except to those pursuing the same courses and many of his classmates came to know him better in subsequent years than while a student. He was an excellent scholar, a man of great dignity and uprightness of character, whose judgment on all questions was held to be valuable. He was widely known for his earnest advocacy of the introduction of the metric system.

In the early days of the physical laboratory at the Institute he was interested in its plan and contributed to its equipment a valuable portable siphon barometer which is still in regular use by the students.

A sketch of his professional work by Mr. Desmond Fitzgerald, with whom at an early period of his career Brooks was associated, will be published in the Proceedings of the Boston Society of Civil Engineers of which he was at one time president.

The secretary has also learned of the recent death of our classmates, Theodore F. Tillinghast and Charles A. Wilbur, but is not at present in possession of further information, which, however, he hopes to secure later.

Members of the class of 1870 in common with other Institute students of that date will feel sincere regret at the decease of Edward C. Pickering, at that time assistant professor of Physics, afterward Thayer professor at Technology, and since January, 1877, director of the Harvard College Observatory. His death oc-

curred on February 3, last, after a short illness from an affection of the heart with supervening pneumonia. The class will remember him with appreciation of his devoted efforts to make a difficult subject clear to them and the skill with which he conducted the always successful experiments that illustrated his lectures.

This is not the place to tell of his great work of research in physics and astronomy, which have given him a foremost name throughout the whole scientific world, but the following comprehensive statement from the formal announcement of his death to the Astronomical Society is an excellent summary of it:

His success in introducing new methods into the observatory, particularly with regard to the determination of the brightness and the spectra of stars, his extraordinary ability in carrying out large projects, and the extent and diversity of his experience and knowledge, have given him a permanent place among the great names in the history of science.

Fuller sketches will be found in "Science" for February 14, 1919, and in the "Scientific Monthly" for March, 1919, the latter of which is accompanied by an excellent full page portrait.

It is a great satisfaction to recall that to the last of his life he remembered with pleasure the days of his Institute teaching and the students of that time whose names were still in his memory and whom he was always glad to meet when opportunity offered.

He retained without abatement his interest in the Institute itself and rejoiced in its prosperity. At the dedication exercises of the new buildings at Cambridge he was present and at the reunion of the graduates of the Course in Physics, which originated with him in 1873, he spoke at some length of the early work of the Rogers Laboratory of Physics and of his interest in its later development.

1873

SAMUEL E. TINKHAM, Secretary, The Warren, Roxbury, Mass.

No report received from the secretary.

Word of the death of Daniel Beckwith reached the REVIEW office February 21, 1919.

1874

CHARLES F. READ, Secretary, Old State House, Boston, Mass.

No report received from the secretary.

Frank A. Magee, Course II, formerly president of the Magee Furnace Company, died at his home in Pomfret, Conn., on November 21, 1918.

1875

E. A. W. HAMMATT, Secretary, South Orleans, Mass.

The thirty-seventh annual meeting and dinner of the class of '75 was held at Young's Hotel at 7 P.M., February 21, 1919, with the following members present:

Beal, Bowers, Dorr, Goodale, Hammatt, Hibbard, Lincoln, Mixer, Plimpton, and R. B. Smith.

President Hibbard called to order at 8.45 P.M. and the secretary read the report of the last meeting, which was approved. He then submitted his reports as secretary and treasurer, which were accepted. Beal said that as the report of the Executive Committee (the dinner) had already been disposed of, no further action was necessary.

Upon motion, duly seconded, the secretary was instructed to cast a ballot for the election to office of the old board, which being done, they were declared elected. This means that our officers for the year are: President, Thomas Hibbard; vice-president, B. L. Beal; secretary-treasurer, E. A. W. Hammatt; executive committee, B. L. Beal, S. J. Mixer, W. P. Willard.

Since the thirty-sixth meeting the secretary has received notice of the death of the following members: Thomas Aspinwall, March 2, 1918; George B. Ferry, January 29, 1918; George B. Frye; Charles H. Williams, M.D., June, 1918; John A. Hildabolt, December 9, 1918; Frederick W. Stickney reported by the postmaster February 26, 1919; also Jacob M. Taylor, on February 20, 1919.

Letters of regret at inability to attend the meeting were read from Edes, W. S. Sargent, Stanwood, Sherlock, Shockley and Homer, the latter having lost, during the past few months, a daughter and son from bronchial pneumonia.

The meeting was adjourned at 10.30 P.M.

1876

JOHN RIPLEY FREEMAN, Secretary, 815 Grosvenor Building, Providence, R. I.

Death has been reaping far too vigorously in '76 during the past few years. A little more than one-third of those who graduated with us have gone on to their reward, and within little more than two years death has taken James, Schwarz, Townsend, Aspinwall, Galloupe, Waitt, Norcross and Buss;—but at forty years after graduation such things are likely to happen.

An account of Theodore Schwarz's life and the steadfast heroism of his late years has already been given in the REVIEW.

Samuel James's loss also is keenly felt by the survivors; all remember his warmth of good fellowship although we had seen little of him for many years; being a mining engineer and following his profession first in a wildly settled district in North Carolina, later in the Rocky Mountain region, and near Salt Lake City, in Mexico, Texas and the State of Washington, he had become known as one of the very best smelter experts in America.

Walter D. Townsend also was a miner and possessed more of the wanderlust than any other Technology graduate. He chose mining engineering largely because it promised to gratify this desire. In early boyhood books of travel were his chief diversion and on graduation he promptly betook himself to Colorado and back into the mountains, but this was not far enough, and it was not long before he was off to Japan and a little later to Korea, which thirty-five years ago was relatively far more distant from Boston than today and about the most distant point to which an engineer could retreat. In the course of his travels he had fallen in love and married a most charming Japanese lady and finally settled down in Chemulpo, and in due time became one of the best known and most highly respected American residents.

In Korea he became director in various mining companies, notably the Chicksan Gold Mining Company, and also had joined with his son-in-law in founding the important importing and exporting firm of Townsend & Company.

The writer had a most enjoyable day at Townsend's home in Chemulpo two years ago, and found it stocked with pretty much the whole line of current American periodical literature and with the "New York Daily Times" also in evidence, so that the family were about as well posted on happenings in the States as though living at the old home. As Townsend remarked, "We are merely four weeks late in our calendar." For years his home had been a rendezvous for naval officers and in the old days there was nearly always a war vessel of America and each of the important European nations lying in Chemulpo harbor, as a central point to China, Manchuria, Korea or Japan, and his life appeared to have been a thoroughly happy one. He told me that he was not feeling just right and was coming to New York and Boston for a medical consultation, and as will be remembered by many of his friends, he did this a year ago, but was made very lame by an accident on shipboard on the way over here which prevented many of the visits to old friends on which he had long been planning. He was able to spend a day at the writer's home and we rounded up those of the boys within telephone call and together motored to Sharon and made what proved our last call on Schwarz. Townsend returned to Korea apparently in fairly good health, but did not long survive. He died March 17, 1918, and leaves a wife, two children and several grandchildren.

Thomas Aspinwall (who died March 2, 1918) had spent his whole professional life in the vicinity of Boston, and like his father before him, was a well known figure in the town life of Brookline. Almost immediately after graduation, he formed a partnership with his warm friend, Ned Lincoln, a graduate of the preceding class, and together for forty years they took an active part in the civil engineering work of the community of which Boston is the center.

A few years ago Tom confided to the writer that he regretted he had not followed the healing profession, toward which he had had at one time strong inclinations, and which he felt gave greater opportunities for identifying one's self with the community in which he lived. That he would have made a success in this line, there can be no doubt, but nevertheless he has left behind a fine record of faithful service and of usefulness in his community.

Francis E. Galloupe had not been active in business in recent years, but in earlier years had a variety of activities in mechanical engineering and manufacturing. First at the old Rhode Island Locomotive Works, later at the Winooski Woolen Mills in Vermont. In later years he devoted himself to real estate development and made his home in Lynn and Revere, Mass. He retired from business with a modest competence a few years ago. He leaves a son, a graduate of West Point.

Henry M. Waitt, who died December 16, 1917, will be remembered as the most studious member of our class and some of the "civils" will remember that he was so conscientiously a slave to duty that when all the rest of us one fine afternoon had decided we could spend the time to better advantage than in the classroom of a certain unpopular instructor, he alone heard the lecture—and we sorrowfully remember that later about half of the examination paper of that course asked questions on the topics that were to be imparted that afternoon. Henry was for several years an instructor in the Civil Engineering Department of the University of Minnesota and later became a bridge engineer with the Chicago, Burlington and Quincy Railroad until failing health prevented. Always faithful and with a warmth of affection for his old-time friends.

E. A. Buss, although with us during only a portion of our course, was known

to all the class, for in those days with smaller classes it was possible for each to be intimate with all of his classmates and also know a majority in the classes above and below. He practiced his profession of mill engineering in Boston almost continuously for forty years. In the past few years he had so steadily devoted himself to his professional work and to outside charitable and philanthropic interests that his health began to fail, and in the middle of the winter of 1917-18 he had a nervous breakdown. He recently went to the hospital for a surgical operation, which was successful, but his strength previously had been so weakened that he did not rally well. Mr. Buss also had been active in promoting the work of Morgan Memorial in Boston. To this he had given much of his time and also his financial support, and from there he went by invitation to Brooklyn, N. Y., where the "Good Will Industries" were founded along similar lines to the work of Morgan Memorial. Mr. Buss, after aiding to start this enterprise, had continued his interest in the work. He was a member of Boston Society of Civil Engineers and belonged to the New England Waterworks Association. His wife died about eight years ago, and of late years Mr. Buss had made his home in Woburn with Mr. and Mrs. Frank W. Howard, who were old-time friends.

Edward M. Norcross was the third member of our class to die during the month of March, 1918. He had showed signs of failing health for some time, but was seriously ill only about a week. His whole life work was that of treasurer for the William C. Norcross Company of Boston, wholesale and retail dealers in brick, cement, and other building materials. His brother was a member of the firm. "Ted," as he was popularly known, while of a cheerful and happy disposition, was led to avoid social functions by reason of his hearing having become impaired, which, as with many other men, made him unduly sensitive—but he followed all Tech literature with keenest interest. He left a wife and a daughter twenty-one years of age, also a son about nineteen, all of whom reside in Needham where Ted had made his home for many years.

1877

RICHARD AUGUSTUS HALE, Secretary, Essex Company, Lawrence, Mass.

CHARLES L. HARRIS, BORN NOVEMBER 4, 1853; DIED FEBRUARY 22, 1919.

The secretary regrets to announce the death of Charles L. Harris, '77, which occurred in Mobile, Ala., on February 22, 1919.

Charles Leonard Harris, who died in Mobile, Ala., Saturday, February 22, was born in Boston, Mass., November 4, 1853. He was the second son of George S. and Sarah Fiske Bacon Harris. When eleven years old he moved with his parents to Hannibal, Mo., where his father was employed as land commissioner of the Burlington railroad. The family moved to Burlington, Ia., in '69 as the road built west; and came to Lincoln in '72. He attended the Denmark Academy and the Massachusetts Institute of Technology, finishing with the class of '77. Before he received his degree as civil engineer he was taken critically ill with typhoid fever. In the four years of convalescence which followed he devoted his time to reading law in the office of Judge Oliver P. Mason and was admitted to the bar.

In 1882 he became a member of an engineering party, making a railroad survey in the western part of the state and in the eastern part of Dakota, which kept him in

the open for the greater part of a year, improving his health to the extent that he entered the employ of the railroad and continued in the service for a number of years. In 1883 he was married to Mary E. Day of Omaha, and settled in Neligh, where he was employed for seven years as cashier of the Citizens' Bank. For twenty years he made his home in Missouri, the greater part of the time being spent in St. Louis, where he was engaged in the railroad supply business. Nine years ago, acting on his physician's advice, he retired from business life and took up residence on a farm in the Ozark Mountains where he lived until two years ago, when he returned to Lincoln. Last fall he, in company with his wife, went south for the winter. Soon after arriving in Mobile he suffered a paralytic stroke from which he apparently recovered and was in good health just prior to his death, which resulted very suddenly from heart failure.

Mr. Harris was a man of strong family affections. The people, place and ways of the past were very dear to him. He retained his membership in the Technology Club of New York City and never allowed his association with the Technology Institute to cease. He was a man that made many strong friendships. As a student of American history he was widely read, in especially that of the West. He loved the outdoor world and enjoyed that part of his life which was spent among the people of the Ozarks. He was an enthusiastic golf player and spent a great deal of time on the links. He was a devout member of the Episcopal Church and dated his active church life from the days when as a youth in college he used to attend service in Phillips Brooks' Church in Boston.

He leaves a wife and one daughter, Celia Harris of New York; also three brothers, Fred L. of Edmonton, Canada; Edward K. of Pasadena, Cal.; John F. of New York City; and one sister, Mrs. Celia E. Harwood of Lincoln.

Since leaving the Institute his interests have been in the West and South, and he has not attended the class reunions. His letters each year have shown the interest which he has taken in Technology and the loyalty to its traditions.

While in St. Louis he was connected with the Scullin-Gallagher Iron and Steel Company, which operated the largest single steel foundry in the country. He retired in 1910, going to his new farm in Ozark County, which he had recently bought.

His son, Clark Woodman Harris, was private in Company F, 352d Infantry, U. S. A., and died of pneumonia in service in France, October 5, 1918. He was a strong, hearty young man twenty-nine years of age, with promise of a long life, and his death was a shock to every one and the supreme sacrifice to his country.

The following is an extract of a letter from Mrs. Harris:

I think you know how he loved the Tech. It was his great regret that he was unable to finish with his class.

The years that he spent with the Ozarks were particularly interesting to me, because he was able to be of such real service to the kindly people among whom he lived and of whom he was so fond.

He had a well equipped cattle farm of eight hundred acres; as it was somewhat remote, it was necessary to have a blacksmith shop upon it and a full equipment of tools of all kinds. He had the best of farm machinery as well as all appliances for first aid to the injured, medical stores, etc. All of his neighbors had free access to everything he possessed. Our farm machinery was hauled over the rocky roads, each of the neighbors using it in turn and knowing that it was his for the asking. The shop and tools were offered in the same generous manner.

The new methods of farming that Charlie tried out successfully were adopted by others. When the women of the neighborhood were unable to market their butter because of lack of ice, it was his idea that they make cheeses instead, and he saw that they had the simplest methods after careful home experiments. All of this was done in an absolutely unconscious manner.

I am telling you this because I believe you will like personally to know that the part of his life which seemed of little importance has really the most significance. We went to the Ozarks because his physician felt it was his one chance to regain his health.

On February 26, 1919, Richard A. Hale of this city was re-elected secretary and treasurer of the class of '77, M. I. T., at the annual meeting of the members last evening at the Engineers' Club in Boston. President Robert D. Andrews presided and those present were:

Robert D. Andrews of Andrews, Jones & Rantoul, Architects, Boston; Francis H. Bacon of F. H. Bacon & Company, Furniture and Interior Decorators, Boston; W. H. Beeching, with Little, Brown & Company, Publishers, Cambridge; George W. Capen, Architect, Canton Corner; E. W. Davis of the Puritan Press, Boston; Richard A. Hale, principal assistant engineer, Essex Company, Lawrence; C. F. Lawton, commissioner of Board of Public Works, New Bedford; B. C. Mudge, with the United Shoe Machinery Company, Beverly; F. I. Sherman, Civil Engineer, of West Mansfield; B. T. Williston, manager of United Injector Company, Boston; C. H. Norton, assistant engineer, with the Massachusetts Highway Commission; H. C. Southworth, in business, Stoughton, Mass.; A. L. Plimpton, assistant engineer, Boston Elevated Railway Company; Edmund Grover, civil engineer, Walpole, Mass.

The old board of officers was re-elected for the ensuing year: President, Robert D. Andrews; vice-president, B. T. Williston; secretary and treasurer, Richard A. Hale.

Letters were received from various members who were unable to attend. G. G. Baldwin, vice-president of the American International Corporation; George W. Kitredge, chief engineer, New York Central Railroad; W. H. Lawton of Newport, and others of the class who have had sons in active service. C. A. Clarke had a son, Lieutenant Clarke, killed in action in France last year. W. H. Whidden had a son, Captain Whidden, who was the first American surgeon wounded in the war and later died of pneumonia in Cambridge, Mass., where he was stationed.

Announcements were made of the death of Frank E. Peabody and I. M. Story, members of the class, who passed away during this last year.

1878

E. P. COLLIER, Secretary, 256 Summer Street, Boston, Mass.

There were present at the alumni banquet in Walker Memorial the following members of the class: Collier, Higgins, Rollins, Schwamb and Williams.

1879

FRANK G. STANTIAL, Secretary,

Care Cochrane Chemical Company, 148 State Street, Boston, Mass.

No report received from the secretary.

Professor George H. Barton of Massachusetts Institute of Technology will take up the position of professor of geology at Tufts College left vacant by Dr. Alfred Church

Lane, who has obtained leave of absence permitting him to do educational work with the Young Men's Christian Association in France. Professor Barton will enter upon his duties with the beginning of next term. He is affiliated with several national geological societies.

1881

FRANK E. CAME, Secretary, 17 Metcalf Apartments, Westmount, Montreal, Canada

FRANK H. BRIGGS, Assistant Secretary, Hotel Puritan, Boston, Mass.

Lieut. Edward Hooper Gardiner of the 50th Aero Squadron, A. E. F., was killed in action September 12 in the St. Mihiel drive. He was the only son of Edward G. Gardiner of our class.

The present address of Frank G. Dort is Place Viger Hotel, Montreal, Canada.

1882

WALTER B. SNOW, Secretary, 136 Federal Street, Boston, Mass.

GRANVILLE T. SNELLING, Assistant Secretary, 114 East 28th Street, New York, N. Y.

The thirty-seventh anniversary dinner was held at the Walker Memorial on Thursday, February 6, with the following in attendance: Darrow, French, Gooding, Hall, Herrick, Jenkins, Keyes, H. F. Ross, Walker and Snow. Recent letters from members of the class convey the following information: Harry W. Jones is district vocational officer in charge of District No. 10, Division of Rehabilitation, Federal Board for Vocational Education, covering the states of Minnesota, North and South Dakota and Montana. From Thomas B. Carson:

It would be the greatest pleasure to drop in on you all some day and have a personal visit. I do not suppose that will be very soon but sometime at least I hope to do it, and as I am still feeling far from old at 59, I hope it will be all right if I defer the matter for eight or ten years yet.

From James Deering, from his Southern home, "Vizcaya," at Miami:

Your letter of January 29 comes under my eye for the first time at this moment. I have been out on a fishing cruise. I trust that the anniversary dinner went off well and that everything prospers with you.

From Walter H. Hersey:

I should like very much to be with you but fear I cannot. Unfortunately the Memorial Building is not built for autos or wheel chairs.

From Miss Ames:

The notice of the thirty-seventh (! ! !) anniversary dinner makes me gasp. Great heavens, are we as old as all that? 'Twas only the other day that we had the twenty-fifth anniversary and that seemed preposterous. Let's drop arithmetic and call it simply an anniversary, or we shall feel obliged in all decency to adopt an elderly aspect. I'm still able to walk without a cane.

At the thirty-eighth anniversary dinner of the "Tech" Arthur W. Walker, its first editor, was one of the guests and spoke in favor of giving credit for editorial service thereon.

1884

HARRY W. TYLER, Secretary, M. I. T., Cambridge, Mass.

The death of Mr. Alfred Stebbins has recently been reported to us, though it is understood to have occurred some weeks ago.

A wedding of international interest took place at noon, March 24, at the Mexican Embassy, when Señorita Maria Bonillas, second daughter of Ambassador Bonillas, became the bride of Lieut. Guiseppe Coppola of the Italian Army, an officer of the Royal Guards, recently on aviation duty with the Italian Mission to the United States. The ceremony took place in the embassy ballroom, which was converted into a chapel.


Members of the class will learn with regret of the accidental death of Puffer's son, Lewis, at Hartford on Friday, March 21. He had just been released in November from the army aviation service and settled down with his wife for what seemed a happy life.

The following plan prepared by a committee appointed for the purpose was approved by the ten members of the class who met at the alumni dinner, March 1:

Meet at the Walker Memorial, Thursday noon, June 19, and have luncheon there. A room will be reserved where luggage may be left, and if any member of the class wishes, arrangements can probably be made for accommodations in the dormitory.

In the afternoon, go to Concord and see the historic places. Members of the class who can furnish a car to carry those who would like to take this trip will please report to the secretary. If enough cars are not available, a Blue Line sight-seeing auto may be chartered. Attendance at some good show in the evening may be a pleasant way to end the day.

Friday morning, go to Gloucester and put up at some hotel on Eastern Point, or other attractive site, and in the afternoon enjoy Old Ocean and visit nearby places of interest, such as Rafe's Chasm or Norman's Woe. In the evening, hold our annual class meeting, with wives and children as privileged guests.

 Saturday forenoon, take a trip to one of the historic places north of Gloucester, Coffin's Beach, via Squam River. This trip would be by boat, except that those who have cars with them may reach the beach in that way. Dearborn, who is familiar with the Cape and its attractions, will act as official guide during these two days. A trip by trolley "around the Cape" may be taken as an alternative to the Coffin's Beach scheme, by those who may prefer land to water.

Back to Boston Saturday P.M.

1885

R. H. PIERCE, Acting Secretary, 462 Walnut Street, Newtonville, Mass.

Newell, like many others of '85, made various desperate attempts to get into army work, but finally had to content himself with more mild civilian occupations, being one of the innumerable "dollar-a-year" men. His contribution was in connection with Colonel House's "Inquiry" and his particular sphere of activity, problems of engineering reconstruction in Asiatic Turkey, a country whose area, topography, climate and other conditions are quite similar to those of the arid west of the United States where he has spent most of his life. He also prepared for the

American Committee of Armenian and Syrian Relief a statement on the possibilities of irrigation and water power in Asiatic Turkey. As a member of the Committee on Reconstruction Problems of the National Research Council he has also given considerable time to discussing these from the engineering standpoint and calling attention to the various agencies which should actively be concerned with reconstruction, urging that public works of value be undertaken at once without waiting for possible lower prices.

Ike Litchfield writes from Washington:

I am sending you under another cover copy of the United States Employment Service Bulletin containing an article on "The Employment Service and Demobilization" from the annals of the American Academy of Political and Social Science, which will give you an idea of what I have been doing here in Washington. When I first came here I placed about from four to five hundred Tech men, mostly as commissioned officers in the production work of the government, in June, with three other men formerly of the United States Public Service Reserve, of which I was an associate director. When the employment service was formed, about February or March, 1918, I was made chief of the Clearance Division and later on became chief of the Skilled Labor Section, which had complete charge of mobilization of skilled labor during the war. After the armistice was signed I became chief of the professional section, which I am now organizing. I expect that this work will keep me here for two or three months more, after which I shall probably locate in the vicinity of New York City.

Arthur K. Hunt writes:

The First National Bank of Boston organized a corporation called The First National Corporation. It has an office at No. 14 Wall Street, New York, and last October I came here in charge of it.

His permanent address until further notice will be in care of the above company.

Charlie Richards, with his usual modesty, writes:

I do not believe I have any news for the REVIEW. Perhaps I might say that I have put in two years of strenuous work as chairman of a committee appointed by the Board of Estimate to make an Industrial Educational Survey of New York City, which has just come out of the press.

Only those who are familiar with this undertaking know what a strenuous job this was. It has been a hard and an important undertaking well accomplished.

Hammond V. Hayes' address is now No. 84 State Street, Boston.

1887

EDWARD G. THOMAS, Secretary, 213 Floyd Street, Toledo, Ohio

The death on February 8 in Philadelphia, from pleurisy and pneumonia, of Dr. Frederic Putnam Gulliver, of Norwich, Conn., is announced. Dr. Gulliver was connected with the chestnut commission in Philadelphia for some years, prior to which he was topographer in the United States Geological Survey. For eight years he was master of science at Saint Mark's School in Southborough, Mass. He was secretary of Section E (Geology and Geography) of the American Association for the Advancement of Science from 1907 to 1911.

1888

WILLIAM G. SNOW, Secretary, 95 Milk Street, Boston, Mass.

Word has reached the secretary of the death on February 11 last of Philip Henry Wynne at his home in Old Deerfield, known as "The Manse." Wynne was born in Elizabeth, N. J., January 11, 1868. He was connected with the class of '88 from 1884 to 1886. The secretary has no account of his early activities after leaving the Institute but it is recorded that in '94 and '95 he was engineer of the Wire Department, City of Boston. From '98 to 1900 he was engaged in the electrical department of the Boston Elevated Railway. He then went with the L. E. Knott Apparatus Company, Boston, as a designer of apparatus until 1906, when he became instructor in Physics, University of Texas, until 1908. He afterwards became connected with the Eldredge Electric Manufacturing Company, Springfield, Mass. In the intervals not stated he was engaged in special and consultation work, improvements in electrostatic ore separators and in various phases of electrical engineering work. Failing health forced him to retire from active work several years ago. Outside of his regular vocation Wynne was much interested in historical subjects. He was married in 1899 to Miss Agnes Whiting of Springfield, Mass., who survives him.

Fourteen members of the class were present at the annual alumni reunion and dinner March 1, 1919.

William L. Dearborn's present address is care Public Works Office, Norfolk Navy Yard, Norfolk, Va.—Maj. Fred J. Wood's present address is 2421 18th Street N.W., Washington, D. C.—John Blodgett is now located at 25 East 30th Street, New York; Stephen Child is with the United States Housing Corporation, 613 G Street N. W., Washington; Herbert F. Pierce is at Bath, Me., engaged in housing work for industrial workers.

1889

WALTER H. KILHAM, Secretary, 9 Park Street, Boston, Mass.

The annual dinner was held at the St. Botolph Club, Boston. President Thurber officiated as usual. Those present were: Thurber, Hawkins, F. L. Pierce, Hunt, W. L. Smith, Kilham, Guppy, A. L. Davis, Truesdell, Gleason, Whiting, Kunhardt, Williston, Lewis, J. P. Gilbert, Wales, Bliss, Hart, Orrok.

Some desire was expressed to celebrate the thirtieth anniversary and the president appointed a general committee consisting of Wales, Whiting and Kilham to consider same.

Lieutenant-Colonel Guppy described his experiences in France with the Railroad Engineer Regiment, which he stated was principally occupied with salvage work and when that was over, considering that they were a picked lot of railroad experts, they were put to work mending ordinary roads.

Major Whiting told of his experiences in connection with the Aviation and Chemical Warfare Service. He was present at the fall of Sedan and had at least one flight in the air at Washington, D. C.

F. L. Pierce told of experiences in connection with the Draft and Fire Prevention Boards and Hawkins of his work in Washington during the war. Frank Hart described the general situation of the Institute and Juddy Wales, on request, again recited "Captain Sims." Wales was induced to bring about a dozen of his marine etchings, which were hung on the wall and much admired.

1890

GEORGE L. GILMORE, Secretary, Lexington, Mass.

Batchelder Brothers, dealers in coal, of which J. L. Batchelder is senior member, in December opened a new Boston office at their plant, at 838 Massachusetts Avenue. The building is of brick, one story in height, and entirely devoted to office purposes. It was built at a cost of about \$20,000.

W. Z. Ripley was appointed by the Governor as a trustee of the Boston Elevated Company, but as Ripley had too many other matters to attend to, he was obliged to decline, as he is now engaged in reconstruction work at Harvard, work for the National Shipping Board, and the drafting of new railroad legislation for the Chamber of Commerce. He was one of the federal mediators in the settlement of the garment workers' strike in New York in January, affecting 35,000 employees. At a meeting February 16, of the Boston Central Labor Union, the formation of a Labor College was laid before the meeting, and it was announced that among others, Prof. W. Z. Ripley had expressed a willingness to give a course of lectures.

More honors have come to the class of '90.

W. B. Poland, who is food director for Europe, with headquarters at 3 London Wall Building, London, E. C., and was given the Cross of the Legion of Honor in July, 1917, has recently been made a Commander of the Legion of Honor by the French government.

Winthrop Coffin of Brookline, Mass., has been appointed a trustee of the Boston Elevated Railway Company to succeed Mr. Galen Stone who has just resigned, and who was a partner of our classmate, Charles Hayden. Mr. Coffin is a member of the firm of Coffin & Burr, bankers; director of the United Electric Securities Company, the Greenfield Electric Light and Power Company, the Boulevard Trust Company, and is a member of the American Academy of Political and Social Science.

Copies of some interesting letters from Schuyler Hazard, Jr., the son of our classmate, have just been received by the secretary. The young man is with the 331st Battalion, Headquarters Company, Tank Corps, in France.

A letter of January 18 from Lieut. John Balch Blood, of the United States Navy, showed that at that time he was at San Juan Harbor at Porto Rico.

J. K. Noyes' address is No. 43 Davis Street, Binghamton, N. Y.

George E. Hale is a member of the Executive Committee of the International Cotton Conference, appointed in Washington in January; and G. L. Gilmore is a member of the Commission that goes abroad in May to arrange for an International Conference to be held in New Orleans in October. The trip will probably last about five weeks. The Commission sails May 10 on the steamer "Lapland."

Miss Margaret Hale, daughter of Mr. and Mrs. George E. Hale, was married December 25 to Lieut. Paul Armand Scherer. The young couple are now in California.

George A. Packard sailed on February 14 with Mrs. Packard from New York for Rio Janeiro. He will probably be in Brazil from four to six months investigating mining properties.

From the post office authorities has come the news of the death of Frederick A. W. Harris, on February 13, 1918.

Letter from F. H. Dodge advises that his boy is in France, where he has been since June. He was in the Argonne Drive, and in the finals in Belgium, and came out O.K. The wedding of his daughter will undoubtedly take place early in the summer when her fiance returns from the other side.

Letter recently received from Andrew Woodman, in Chicago, advises that he is in control of two plants that have been making parts of the steel construction for

ninety-five of the ships at Hog Island; all of the boilers for thirty-six of the wood ships, nine of the steel ships, and seven of the tugs. He also had orders for twenty locomotive cranes for the Director-General Military Railways, but the arrival of the armistice cut out fifteen of these, so that he only produced five.

Schuyler Schieffelin, who was captain in the 493d Aero Squadron, formerly the 81st, has recently returned from France. He writes: "Battles none, wounds none. Hope for better luck next time."

The General Electric Company has formed an export corporation to go after foreign trade. It will probably be known as the International General Electric Company. Charles Neave, '90, of Fish, Richardson & Neave, Boston lawyers, will be chairman of the board of the new organization, and Gerard Swope, '95, who has resigned as vice-president of the Western Electric Company, will be president.

The new company will differ from the export organizations which have been formed by other industries, notably copper, steel and paper, in that it is exclusively a General Electric proposition.

It is figured that the collapse of German industry has created some \$60,000,000 or \$70,000,000 worth of export electrical business annually. The big German electrical companies were formerly large exporters, and it is the hope and expectation of the General Electric interests that they will be able to corral a substantial part of this former German business. Before the war the German manufacturers used the General Electric Company patents, but it is a question if they have not abrogated this right.

Following is a list of the men of the class who have been in the government service during the war. The secretary will greatly appreciate being advised of any omissions. We are very desirous of having a complete record of what the members of the class have done in the past four years of the war:

Charles H. Alden, IV, Capt., Asst. to Depot Q. M., Q. M. C., A. E. F., France. —Spaulding Bartlett, V, member Joint Woolens, Advisory to Council of National Defense (civilian). —John Langdon Batchelder, VII, Red Cross work (civilian). —John Balch Blood, VI, executive office, U. S. S. "Kwasind." —Edgar James Borden, I, Industrial Dept., C. & R., Hull Div., Portsmouth Navy Yard (civilian). —Ernest H. Brownell, I, U. S. Naval Aviation Forces, Foreign Service, 4 Place D'Iena, Paris. —William C. Curtis, Capt., Med. Corps. —Darragh DeLancey, Secretary War Dept. District Board of Second District, Conn. (civilian). —Walter Ellis, VI, Finance Comm., Safety Comm. (civilian). —William Parker Flint, II, Electrical Work in Shipbuilding (civilian). —Samuel D. Flood, II, Ensign, U. S. N., U. S. S. "Yankton." —George W. Fuller, V, Consulting Engr., U. S. Pub. Health Bureau, Camp Sanitation, Water Supply (civilian). —Alfred H. Granger, Capt., Engrs., U. S. A., Camp Humphreys, Va. —George L. Gilmore, II, Production Branch on Textiles, Q. M., Boston (civilian). —George Ellery Hale, Chairman Nat'l Research Council (civilian). —Winthrop T. Hodges, IV, Sergt., 19th Co., Mass. State Guard, Nahant Public Safety Comm. —Lois Lilley Howe, IV, Architect of Canteen, Boston Common Coffee House, Ayer, Mass. (civilian). —Francis Howe Kendall, I, Chairman of Finance Comm. of Belmont, Mass. (civilian). —Bertram H. Mann, VI, Assistant in Building and operating railroad to Camp Pike (civilian). —George L. Nelson, II, Corp., Mass. State Guard, 1st Motor Corps (civilian). —Henry B. Pennell, IV, Capt., State Guard, 14th Regt., Chairman Safety Comm. (civilian). —William B. Poland, I, Director in Holland of American Comm. for Relief in Belgium. Honored with Cross of Chevalier of Honor by President Poincaré of France (civilian). —Knight C. Richmond, II, Industrial Inventory, Police Constable, Providence, R. I. (civilian). —Calvin W. Rice, VI, General Engr. Comm., Council of National Defense (civilian). —Herbert

George Ripley, IV, Railway Investigation for Government (civilian).—William Zebina Ripley, I, Sub-Comm. Council of Nat'l Defense for Mediation and Conciliation (civilian).—Schuyler Schieffelin, VI, Capt., 493d Aero Squad., A. E. F.—Charles W. Sherman, I, Sergt., Mass. State Guard, Co. F, 11th Regt. (civilian).—Louis A. Simon, IV, Office of Supervising Architect, Treasury Dept. (civilian).—Frederick W. Swanton, VI, Pvt., National Capital Volunteer Guard, Examiner U. S. Patent Office, Washington, D. C., (civilian). Henry M. Waite, I, Lieut.-Col., Director-General Trans., A. E. F.—Elton D. Walker, I, Capt., 15th U. S. Engrs., A. E. F.—Henry W. Whitman, Food Comm. of Newton Centre, Mass., Public Safety Comm., Liberty Loan Speaker, Bureau of Information (civilian).

At the annual alumni gathering, held at the Walker Memorial, Saturday evening, March 1, sixteen of the class of '90 were present, as follows: Sherman, Collins, Gilmore, Bartlett, Batchelder, Borden, Brownell, Burley, DeWolf, Goodwin, Kendall, Rogers, Royce, Tilson, Whiting, and Boss.

All certainly enjoyed themselves, and regret that more could not have been present. A telegram was received during the evening from George E. Hale at Washington, regretting that he could not be with us, and extending his best wishes and continued success to Ninety.

Harry Brownell showed up for the first time in years, as he has been connected with the navy department and away from Boston for more than twenty years. He is now a commander in the Civil Engineering Corps, U. S. Navy, located at Portsmouth, N. H. Harry's son is a lieutenant-commander, in charge of a division of five submarines; his son-in-law is a commander in the navy; and his younger son is a cadet at Annapolis.

Charles Hayden has been elected a director of the Cuba Cane Sugar Corporation.

Frederick P. Royce, vice-president of one of the Stone & Webster corporations of Boston, has been appointed general manager for the receiver of the Brooklyn Rapid Transit Company. Mr. Royce took up his new duties January 31. He will take the place of Timothy S. Williams, president of the Brooklyn Rapid Transit Company, who at his own request will be relieved of all responsibility for the administration of the Brooklyn Rapid Transit Company on January 31. His home is at Dedham, Mass.

A movement is on foot to limit competitive bidding in building contracts and, so far as possible, substitute the cost-plus plan under which the government got such tremendous results during the war. One of the prominent advocates of the change is Leonard C. Wason, president of the Aberthaw Construction Company of Boston, former president of the American Concrete Institute, and now a member of the executive committee of the Associated General Contractors of America. Mr. Wason, who speaks from an experience of twenty-five years, during which the Aberthaw Company has executed millions of dollars' worth of work under the cost-plus plan, agrees exactly with General Marshall, chief of the Construction Division of the War Department, who is an avowed champion of the cost-plus plan.

The great lesson of this war on the subject of relationship between the contractor and owner is the cost-plus contract. This represents the only equitable basis under which a contractor may perform constructive and economic service for the owner. It is the only form of contract which affords protection to both parties. To me all the energies, thoughts and the experience of this country within its own continental lines during the past year and a half of this world's struggle shall have been in vain unless out of it shall grow, as a permanent institution solidifying the economic relationship between the contractor and the owner, the cost-plus contract.



LIEUTENANT RICHMOND YOUNG
Died October 10, 1918, at Fleuy-sur-Aire, France

1891

HENRY A. FISKE, Secretary,

Care General Fire Extinguisher Company, 275 West Exchange Street, Providence, R. I.

Gardiner F. Wells, who has been until now manager of the division of transportation of the United States Housing Corporation, has resigned to enter the consulting engineering field, paying particular attention to public utilities. From 1901 to 1916 he was with Stone & Webster. Since March, 1916 he has been head of the corporation bond-buying department of Arthur Perry & Co., Boston, and during the war period served first as major in the Ordnance Department of the army and later on the staff of Otto M. Eidlitz head of the government Bureau of Industrial Housing and Transportation.

"Will" Wilder was recently made one of the board of governors of the American Dyes Institute, which is the representative organization of America's newly established dyestuff and intermediate industries.

Arthur Hatch says that he is still busy dredging and improving the Providence water front. As he puts it—prohibition and "dry" docks go hand in hand.

A letter from Bert Kimball reads as follows:

While in Washington for a few days early in January I attended a dinner given by the officers of the Nitrate Division, Ordnance Department. Besides the commanding officer of the division the chief of ordnance and many civilian experts were present. It was in a way the breaking up of many pleasant associations and the remarks that followed the dinner were, naturally, a sort of a review of the work of the division.

When hostilities closed two plants were ready to manufacture and two more in process of erection.

Ammonium nitrate is now being made synthetically, the nitrogen being obtained from the atmosphere. As ammonium nitrate is an explosive and a fertilizer, it would seem desirable to continue the manufacture.

Ernest Tappan is still in France working in a Young Men's Christian Association foyer, and does not expect to return for some time, as helpers are still needed "over there."

The sympathy of the class is extended to Stephen Bowen, whose wife (nee Pratt) passed on December 23, 1918.

Miss Mary Frances Fiske, eldest daughter of Henry A. Fiske, is to be married May 10 to Mr. Kingman Packard Cass of Tilton, N. H. During the war Mr. Cass was a lieutenant in the United States Army, Quartermaster's Division. He is a graduate of Wesleyan University.

Maj. Woodruff Leeming writes that he has just returned to Paris from Italy where he has been estimating damages for the Peace Commission.

Will Fuller's son is a lieutenant in the Ordnance Department and still in France.

—Maj. Jere Campbell is at Les Sables d'Olonne, France.

The class of '91 extends its sympathy to Harry H. Young on the death of his son, Richmond, who made the supreme sacrifice in France, that right and not might should rule.

Lieut. Richmond Young was graduated at Harvard in the class of '16. He was twenty-four years of age. He received his commission as first lieutenant at Plattsburg in 1917 and was assigned to Co. C, 304th Infantry at Camp Devens. On July 8 he sailed with the 76th Division and after arriving in France was transferred to the Sunset Division, 163d Infantry. In September, 1918, he was transferred to Co. K, 38th Infantry, 3d Division, composed of regulars and went to the front in the

Argonne drive. He was wounded October 9 in taking Romagne, a little town between the Argonne and the Meuse, and died October 10 at Fleury-sur-Aire, where he was buried in a French cemetery with full military honors.

1892

GEORGE H. INGRAHAM, Secretary, 2040 East 107th Street, Cleveland, Ohio

CHARLES H. CHASE, Assistant Secretary, Tufts College, Mass.

Major Williams, who went over to France in August, 1917, has been connected with the transportation service as division superintendent and commanding officer of the 64th Engineers and 53d R. T. C. Since December, 1918, he has been a member of the Inter-allied Railway Commission in full charge of all German railways on the American front. Address: R. T. C., N. A., U. S. P. O. 713, A. E. F.

Secretary Wilson has appointed L. K. Sherman, now chief engineer of the housing corporation, director of the Bureau of Industrial Housing and Transportation, United States Department of Labor.

As reported in "Science" January 31, Leonard Metcalf was recently elected vice-president of the American Society of Civil Engineers.

The following changes in address have been forwarded to me: H. S. Miller, 1037 East Jersey Street, Elizabeth, N. J.; Prof. H. R. Moody, College of the City of New York, Convent Avenue and 140th Street, New York City; Eugene S. Pettee, 79 Milk Street, Boston, Mass.; Capt. John W. Hall, Adjutant Army Service Corps, A. P. O. 712, A. E. F.

1894

SAMUEL C. PRESCOTT, Secretary, M. I. T., Cambridge

With the end of the war it will be of very great interest to learn how many of the members of the class have been engaged in war service either directly or indirectly. Probably the number of those so occupied will be very much greater than is suspected, as many men working in a civilian capacity have been carrying on work of enormous value to the government.

Guy Lowell deserves special mention for the wonderful work carried out under his supervision for the Red Cross in Italy. This has received specially favorable comment through the press and Lowell has been the recipient of the War Cross and other decorations from the Italian government in acknowledgment of the service he has rendered. A special account of some of the experiences of Lowell was published in the "Transcript" about March 8 and is specially interesting reading for those who are acquainted with the man.

Another man who has been particularly active in service for our allies is M. S. Chace. Chace went to France and joined the French Artillery in August of 1914, but was later sent back on orders from General Mangin to be a member of the French Artillery Commission and later of the French High Commission in charge of inspection and to assist in the purchase of artillery supplies and marine engineering supplies for the French navy. Chace has been located in this country therefore for

most of the war, while his desires have been to be at the front in the service of the French government. He had a very responsible position in this country and maintains an office at 518 Book Building, Detroit. In recognition of his service and devotion he has been made Chevalier of the Legion of Honor, the recommendation for this honor having been made by M. Andre Tardieu. Chace's work for the French government will probably keep him busy for about two or three months more, but he hopes to be through in time for the twenty-fifth reunion of the class in June.

George Tabor has been engaged in the Ordnance Bureau at Washington in the Procurement Division and has rendered a service of incalculable value in this connection. While working as a civilian, Tabor has had a very responsible position and the flow of supplies of a certain kind to the army has been directly under his supervision. Tabor wrote a poem last summer for the periodical published by the Ordnance Department.

Tenney was for many months engaged in the problem of securing toluol from gas plants for use of the army in making explosives and in this connection spent a great deal of time in New York and Washington.

Piper joined the forces of the Quartermaster's Department in a civilian capacity and had charge of the purchase of the rubber footwear for the army, a position for which his long experience had admirably trained him. There is no question that his expert knowledge of values and of the processes of rubber boot making was the means of saving the government many millions of dollars.

Weil, whom the secretary had not seen for over twenty years, was discovered working in the Ordnance Department with the rank of captain.

Tracey has been connected with the Construction Quartermaster's Department in a civilian capacity for over a year.

R. S. Weston has been serving as engineer for the Housing Corporation and the Emergency Fleet Corporation. His title was project engineer and his work has been especially concerned with baths and housing.

Phelan was engaged on experimental work in connection with the Chemical Warfare Service, this work being carried out at the Institute. At the present time, in addition to his teaching at the Institute, Phelan is giving a course on Industrial Chemistry to seniors and graduate students at Harvard.

Scott has gone into the metal business and is now connected with J. H. Higgins, 198 Globe Street, Providence, R. I.

W. H. Pratt is still connected with the General Electric Company at their Lynn plant. Pratt has a son in the sophomore class at the Institute.

The work of C. G. Abbot continues to receive especially favorable comment. The following mention of his work recently appeared in "Science":

Dr. Charles Greeley Abbot has been appointed assistant secretary of the Smithsonian Institution. Dr. Abbot was born in Wilton, N. H., May 31, 1872. He was graduated from the Massachusetts Institute of Technology, class of 1895, with the degree of Master of Science, and in 1914 he was awarded the Honorary Degree of Doctor of Science by the University of Melbourne.

Dr. Abbot was appointed assistant to Secretary Langley in the Smithsonian Astrophysical Observatory in 1895, and has been engaged continuously in original researches on solar radiation in co-operation with Dr. Langley up to 1906, when he assumed entire charge of that work as director. His studies covered the fundamental problems in connection with the amount and variability of solar radiation, its absorption in the solar and terrestrial gaseous envelopes, and the effects of its variability on climate.

In recognition of the character of his work, Dr. Abbot has received the Draper gold medal from the National Academy of Sciences, the Rumford gold medal from the American Academy of Arts and Sciences, and membership in the National

Academy of Sciences, the American Academy of Arts and Sciences, the Astronomical and Astrophysical Society of America, the Royal Astronomical Society of Great Britain, the Societe Astronomique de France, the Society of Astronomy in Mexico, the Academy of Modena in Italy, the Deutsche Meteorologische Gesellschaft in Germany, and other organizations. The results of his work have been published largely in the *Annals of the Astrophysical Observatory*. He is also the author of a work entitled, "The Sun," published in 1911, and has contributed many scientific papers to special astronomical and astrophysical journals.

A. G. Zimmerman has left Chicago and is now located at 85 9th Avenue, New York City.

The secretary rejoices to announce that he is once more a free man, having been discharged from the army on March 20. He hopes that hereafter he will have opportunity to attend more scrupulously to the duties of the class secretary and that the pages of the *REVIEW* may not be so barren of '94 notes. As a part of his work in the army he made an investigation of dehydrated foods for army supplies. As a result of this investigation the Secretary of Agriculture requested his detail to the Bureau of Chemistry to take charge of the newly created Division of Dehydration and to administer the special appropriation of Congress for this purpose. This work is still going on and as a result the secretary is commuting between Washington and Boston every week. The work is of much interest and it is hoped it will result in the establishment of the new industry of dehydration on a firm commercial basis. Another honor which has come to the secretary since the last report is the presidency of the Society of American Bacteriologists, while more recently, selection by the Executive Committee of the Society to serve as a representative on the National Research Council.

Special attention is requested at this time to the fact that this is our twenty-fifth anniversary and that it is fitting and desirable that we should have a large and enthusiastic reunion in honor of the event. Already much interest has been manifested and Tufts has been kind enough to suggest that if it would be possible to have our reunion at Pinehurst, he could place at our disposal his many agencies of entertainment. Discussion of the matter with a number of the class seems to bring out the fact that it is impossible to have our reunion before the Pinehurst season ends and that it would probably be more desirable to have it at some place in New England in June. It is the intention of the secretary to send out a circular letter on this matter within a short time, asking for suggestions and also bringing up certain other matters which have come to his attention from different members of the class. The important thing is for all members of the class to bear in mind that this is a reunion year and to count so far as possible upon being present when the affair is consummated. We should be glad to have suggestions as to the place and the time, whether it should be at the seashore or inland, in the vicinity of Boston or nearer New York, Philadelphia and the West. As there are probably some who have never seen the new buildings, it is perhaps desirable to have the meeting at such a place that a portion of a day might be spent in a personally conducted tour about the new buildings. This, however, is not an essential and the secretary and the local committee will gladly co-operate with those from distant points to make this the greatest reunion in the history of the class. Mark on your calendar against June "Class Reunion" and be on the lookout for special notices at any time for the next two months.

1895

WALLACE C. BRACKETT, Secretary, 105 Washington Street, Boston, Mass.

A meeting of the class was held at the Boston City Club on the evening of February 18, 1919, with an attendance of sixteen,—Barrows, Brackett, Booth, Chase, Conant, "Gus" Clapp, "Andy" Fuller, Hurd, Hannah, Meserve, W. D. Parker, R. K. Sheppard, W. S. Williams, Roger Williams and Winkley. A most enjoyable evening was spent, thanks to Meserve, Major in the Coast Artillery, now stationed at Fort Banks and recently returned from France where he served with the 60th Coast Artillery. His description of his experiences in the service both here and "over there" was most interesting. This is his first appearance at a '95 class dinner since his graduation.

In the absence of "Charlie" Parker, the class president who is now in the South recovering from a breakdown due to overwork, Winthrop Parker, the secretary, announced as a result of the letter ballot for class officers the election of T. B. Booth as president and W. C. Brackett as secretary.

To those of the class who appreciated the paragraph in the recent class letter relating to dues and sent in their checks, the secretary sends thanks. Those who overlooked or forgot this item he wishes to remind that the dues are from \$1.00 up to any amount you choose to send, and that just because you forgot before is a good reason why you should not forget now. Send in these dues—we need the money.

At the annual dinner of the Alumni Association held at the Walker Memorial the following '95 men were present: Hannah, W. D. Parker, "Gus" Clapp, Meserve, Whorf, Roger Williams, W. S. Williams, Booth and Brackett. Among the members of Class 1918 who were admitted to the Alumni Association at this meeting was the son of Whorf, '95.

The secretary regrets to announce the death of Horace Kibbe Turner, son of Rudolphus Turner and Ella Kibbe Turner. He was born in Quincy, Ill., December 9, 1872, and attended the Massachusetts Institute of Technology with the class of 1895. He was a successful producer of art subjects for schools and colleges. He died at South Wellfleet June 9, 1918.—John H. Gregory writes us that his address is now care Johns Hopkins University, Homewood, Baltimore, Md.—F. T. Miller is engaged in government work in connection with the United States Department of Labor, Information and Education Service.—E. F. Badger is chemist in charge of the new Experimental Station of the city of Milwaukee, Wis., on the purification of water with special reference to the water of the Great Lakes.—Walter W. Reed is now with the Bureau of Yards and Docks, Navy Department, 1328 Randolph Street, N. W., Washington, D. C.—Huxley has again left for Europe.

Tillinghast writes he received his discharge as colonel in the Coast Artillery January 25, and is now in Porto Rico for a month, but will soon be back with the Textile Finishing Machinery Company, Providence, R. I.

Be on the lookout for a communication from the new class officers and please send in all information asked for promptly. We hope to be able to arrange for an informal outing for the class this spring, if possible. It is to be held at some place which would be easily accessible to Boston and New York. If it is found to be feasible further information regarding same will be sent all members.

1896

CHARLES E. LOCKE, Secretary, M. I. T., Cambridge, Mass.

Papers report that the 44th Base Hospital, which is Rockwell's unit, has been ordered for early convoy home and, therefore, John should be back to the States some time this spring. At the time of writing this (March 20) Mrs. Rockwell reports that her last letter from John, dated February 22, said that he was still at the hospital, but that they were told on January 31 to be prepared to leave at any time and since that date they have been practically marking time, and waiting for orders to move, although John did get a two weeks' leave of absence and made a very enjoyable trip to Rheims, Nice and Monte Carlo.

P. W. Litchfield, vice-president and factory manager of the Goodyear Tire and Rubber Company of Akron, Ohio, has returned from Europe after having spent two months abroad. Mr. Litchfield, together with Ralph Upson, the Goodyear balloon expert, and Clifford Slusser, the efficiency manager of the Goodyear factories at Akron, formed the civilian part of a military committee sent to Europe by the Navy Department to study airship conditions in the allied countries at the time of the signing of the armistice.

This duty took the Goodyear officials to England, France and Italy, where they visited and inspected every construction plant, balloon factory and flying field in those countries and gathered extensive data which has been incorporated into a report that has just been submitted to the Navy Department, together with various recommendations and observations on the future of the government's airship policy.

The Goodyear factories at Akron manufactured considerably over half of the balloons of all descriptions which were used by the government during the war, and Mr. Litchfield says that he found the Goodyear products in the front ranks of the aircraft in use abroad.

During his visit in Europe Mr. Litchfield was also authorized by the War Industries Board at Washington to make a study of the performance, operation, and repair work on automobile tires in foreign countries. The report which the Goodyear officials submitted on these subjects will be used by the government in analyzing tire conditions as related to the military service.

Leighton has been recently chosen chairman of the newly formed National Service Committee of the Engineering Council. The "Engineering News Record" of January 30 refers to this appointment as follows:

M. O. Leighton, consulting engineer, Washington, D. C., has made a particular study of hydro-electric development in this country. He testified before the Congressional Committee on the possible commercial development of navigable rivers and streams in forest preserves, indicating also to what extent canalization of navigable streams would result in improvements to navigation as well as in water-power possibilities. He has made a study of the application of water-power to many uses, including industry, central stations, and electro-chemistry and especially to railroad electrification. Mr. Leighton was born in 1874 and was graduated from the Massachusetts Institute of Technology in 1896. He engaged chiefly in hydraulic work, and in 1906 was appointed chief hydrographer of the Geological Survey. He continued in this office until 1913, when he took up consulting work. He has been a member of a number of government commissions to study waterways.

The secretary grieves to report the death of Harry P. C. Browne. The report came from Charley Lawrence who paid a splendid tribute to Browne, as evidenced by the following letter:

It is my painful duty to advise you that our good friend and classmate, H. P. C. Browne, of Houston, departed this life on December 30 last at his Houston residence. Browne did not marry until very recently, i. e., April, 1917, when he was married to Miss Doris Young of Houston, who survives him.

Browne was not particularly well known to his classmates, but to those to whom he was better known in later life he revealed a remarkable and admirable character. His brain was of the analytical type, which made his opinions extremely valuable. In his chosen field of endeavor, he had no superiors; his energies being devoted particularly to developing instruments for measuring with high degree of precision, distance traveled by motor driven vehicles, which business had reached a point where he was netting excellent returns, when he was cut off.

Browne was respected most highly by all business men with whom he came in contact because of his versatility and accuracy of conclusion after he had given careful consideration to a subject. In patent law his opinion was respected even by those who made this line of work their specialty, and he was asked by one of the leading firms of this country to take a position with them so as to examine all claims which they made on patents presented to them for filing.

In the opinion of the writer, Browne was one of the shining lights of the Class of '96, though his extreme modesty kept him from pushing himself at times where he may have made a more remarkable showing. To sum it all up, he may have been called a true Christian gentleman, and those of us who knew him best feel keenly his loss.

It was the secretary's pleasure to have known Browne somewhat intimately during his course at Technology and to have realized his fine points.

The other Harry Brown still remains to us, although, as reported in past REVIEWS, he went through a long and dangerous illness a year or more ago.

At the alumni dinner in the Walker Memorial, on March 1, the following '96 men turned up: W. T. Dorrance, L. E. Emerson, H. G. Grush, H. W. Hayward; C. E. Locke, A. D. MacLachlan, M. O. Priest, E. H. Robinson, and S. F. Wise. Also Harry Jackson was present but sat with '97. Dorrance made the trip all the way from New Haven where he is still with the New York, New Haven and Hartford Railroad. It was also a pleasure to see Priest, who has been a very infrequent attendant. He has an additional tie to Technology now, in that his son, who graduated from the Mechanical Engineering Department, is now an assistant in that department.

Miss Elizabeth Fisher, professor of Geology at Wellesley, has this year given two courses in connection with the Lowell Institute, one a course in the Teachers' School of Science, on "Geographical Influences on the Division of Europe," and the other a collegiate extension course on "Natural Resources and Their Conservation."

Another one of our classmates passed away last summer, although word did not reach the secretary until January. This was Fred W. Smyser, one of the four Smyser brothers of '96. We all remember Fred for his earnestness, which he showed even as a student. His death occurred at Harwich Center, Mass., on Wednesday, August 27, 1918, and the following is taken from the Harwich "Independent" of September 4:

This community was startled and saddened when it heard of the sudden death of Mr. Frederick W. Smyser, on Wednesday noon last, at the home of his mother, Mrs. C. F. Smyser. The last call came without warning while he was walking about his mother's estate, although his health for a long time indicated the possibility of a sudden collapse. He had been here a number of weeks in an effort to improve.

Mr. Smyser was forty-nine years of age, a graduate of the Massachusetts Institute of Technology in June, 1896. He has since been engaged in work of great responsibility for the government, and his ceaseless energy and conscientious faithfulness to duty resulted in a break-down in health.

He first taught mathematics on the training ship "Enterprise" for two years,

and gave one year as instructor in mechanical drawing at the Columbus, Ohio, University.

During his connection with the United States steel plant at Duquesne, Pa., it was the strain of the arduous duties in superintending the running of the seven great engines under a necessarily defective system, to keep the blast furnace in operation, that first undermined his health.

He was in the employ of the General Electric Company at Schenectady, N. Y., for some time, and then became a member of the staff of the National Board of Fire Underwriters, and at the time of his death was the assistant general manager, having risen to that high position by merit and strict application to duty.

Mr. Smyser was held in the highest esteem by his business associates and throughout his illness they gave repeated evidence of their great regard for him. He was a man of very pleasant personality and beloved by all with whom he came in contact, who now deeply deplore his untimely passing.

His death, due to angina pectoris, from which he had directly suffered for three months, leaves a gap in the devoted family circle never to be filled. The community is a unit in sympathy with the bereaved ones. Deceased leaves a wife and one son, Mr. Fred Hawley Smyser, a student at Technology, in Electrical Engineering.

The funeral was from his mother's home, at eleven A.M., Saturday, and private. Rev. George W. Clark officiated. Burial was in Island Pond Cemetery, at which the Masonic rites were performed by Pilgrim Lodge of Harwich.

Joe Harrington has been heard from and reports for himself that he has changed his position and is now with the James A. Brady Foundry Company, at 45th Street and Western Boulevard, Chicago, Ill. Classmates will remember Joe has made a specialty of boilers, particularly the stoking of boilers. Perhaps the following account Joe's own words will tell the story better than the secretary can:

For about a year I was administrative engineer for the Fuel Administration for the State of Illinois, having in charge the conservation of coal in the thirteen thousand or more power plants of the state. This work we organized along very systematic lines, and I think our intensive propaganda resulted in the saving of many thousands of tons of coal. At any rate, there is a greater interest in fuel conservation in the middle west than ever before, and for the first time power plant owners and operators are taking real interest in conservation matters and spending money that more money may be saved.

About a year ago I gave up my private consulting practice in the operation and efficiency of steam power plants on account of its being too strenuous. I was, perhaps, too successful, and on account of its being a strictly personal service, I was at work all the time. For the sake of my health I gave it up and made a very favorable connection with one of the finest foundries in the middle west—the James A. Brady Foundry Company. I am the vice-president and chief engineer of this organization, having particular interest in the manufacture of engineering power plant equipment which we make. This consists of several types of stokers, coal and ash-handling machinery, and automatic coal scales.

We are one of the few concerns that are busy, and the outlook at present is for an extraordinarily heavy season.

I have served on quite a number of special commissions pertaining to the adjustment of large contracts, and have done an endless amount of lecturing and writing in connection with my specialty.

Two '96 majors have forsaken Washington to go back to their old jobs, Major D. M. Bates being again with the Lewiston Bleachery and Dye Works, Lewiston, Me., and Major W. Guy Wall being with the National Motor Vehicle Company, Indianapolis, Ind.

Other changes of address received are as follows:

Mr. Frederick E. Field, Public Works Department, City Hall, Montreal, Canada.—Mr. Myron L. Fuller, Box 1109, Dallas, Texas.—Mr. W. C. Haseltine, care Swartz & Company, New Orleans, La.—Mr. Alfred V. Shaw, 6212 25th Avenue, S. F., Portland, Ore.—Mr. J. W. Stickney, 3311 North Meridian Street, Indianapolis, Ind.

Mrs. Walter Dodd (Helen Chamberlin) East Corinth, Vt., has put out a very tempting price list of maple products from her Twinflower Farm. She and her husband have made a specialty of this for a number of years, and this year have added to their holdings of maple trees to try to supply their increasing custom.

1897

JOHN A. COLLINS, JR., Secretary, 67 Thoindyke Street, Lawrence, Mass.

CHARLES W. BRADLEE, Acting Secretary, 54 Canal Street, Boston, Mass.

In answer to an urgent appeal for news about '97 men the following interesting replies have come:

From Providence, R. I., Henry Ballou writes:

Your invitation to send autoflattery as class news, is to hand. Referring to the dearth of such matter in the past, be assured that we of '97 do not dislike publicity and free advertising, oh no! It is merely that we dread being mistaken for warm air notables. No! This is not an excess of modesty; we await the time when our accomplishments will speak for themselves so loudly (i. e. fetch such a roar), as to be heard from Beantown to Ochotsk.

To date, we are sort of handing it to Spear for his hole under Manhattan; to Atwood for water works; Yale bowls, destroyer plants, etc., to Professors Breed and Hosmer; to Parsons for running the Bureau of Yards and Docks. Say, let the secretary write this! What do we pay him for anyway? However, twenty-two years not having brought complete plaudits of the wide world, it may be that our secretary lacks minor details here and there. So here goes: born, once; married, once; children, same; death, slow, as yet.

By the grace of a very able partner named Jenks, it is allowed that Jenks & Ballou, in twenty years, have done a muchness of engineering work for industrial enterprises, public service corporations, cities, towns, benighted individuals and lawyers. The number of these jobs is alleged to total above 1,800; and the cost (goodness knows what the value may be), sundry millions. Power plants seem to dominate the composite, to the number of over a hundred.

Ruminating on the whole, it is felt that engineering is an exact science, being especially exacting as regards knowledge of human nature.

Wherefore, having thus grudgingly loosened up, I would hail: What Ho! Ye long suffering, hard-working veterans of '97 (for veterans you have perforce become) stand forth and acknowledge that for a score of years you have worked like dogs; yes, worked the very thatches off your beans. Stand forth and tell your classmates a word or two about it. Yours is a creditable record, and we will brag about it to every gink we meet.

In the words of our Bradlee — paraphrased — don't be so darn modest; twenty years have passed, — speak up now and let the rest of us hear of you before the flu gets us all.

George Wadleigh from Webster Groves, Mo., under date of March 9, sends the following:

While sending you check for this year's dues, I am going to get out of my system a "kick," concerning the lack of '97 news in the Technology REVIEW. I realize that like the rest of us, you are a very busy man and the job of Class Secretary can be quite a burden. It was with the idea of helping you that an Executive Committee was formed. If you lived a thousand miles from Tech headquarters you would appreciate more what class news means and that I have a real complaint to register.

I know that you have a good comeback; that no one sends in news. Well here is my "bit," unfortunately personal. I was fortunate enough to have the opportunity of serving the Emergency Fleet Corporation as District Supply Manager

for the most of last year, helping to get our merchant fleet out. It was strenuous work and if I had not enlisted Feeley, who gave up his work in Chicago at much sacrifice, should not have made as much of a success of the work as we did. Feeley has now returned to his company; M. D. Knowlton and I have returned to Bemis Brothers Bag Co.

There were a lot of Tech men in Fleet work. Hope their part will be written up some day.

Henry Jackson, now with Monks & Johnson, architects and engineers, at 99 Chauncy Street, Boston, sends an interesting account of his work:

In September, 1917, I was asked by Monks & Johnson to take charge for them of the layout for heating, lighting, plumbing, etc., for the temporary buildings at the Chelsea Naval Hospital in Chelsea, Mass. As this was a "rush job," and men were hard to get, it made quite a pretty piece of work to get this thing through in the three weeks that were allotted to us. We had to entirely re-model their Power Plant, removing one boiler and installing two, also an entire new unit for forced circulation of hot water—the water to be supplied to two groups of buildings, one on the top of the hill near the present hospital, and the other to a lower portion over near the New England Coal and Coke Company's plant, that is just across the Creek from them. Each group consisted of ten wards with barracks and mess house.

We also had to install a complete sewerage handling outfit for the lower group, consisting of an electrically driven pump set in a concrete pump, discharging to the Chelsea sewer. The drawing and the layout were comparatively easy, but the writing of the specifications along the lines of government specifications was some job. If you have never tackled writing a specification along government lines and want something to do that will make you tear your hair, try one of these.

This job off my hands, I expected to get back to the old stand, but I was asked to assist in the development of the plans for a shipyard, taking care first of the compressed air outfit. I wrote up a set of brief specifications for electrically driven compressors, and also laid out roughly the plans for the air lines. This plant developed into the Squantum Destroyer Plant.

This work kept us busy until June of 1918, and when I say busy, I mean just what I say. It was busy days, nights, holidays and Sundays. There was no letup, and no chance to make changes. The plans had to be right the first time, or they were wrong forever.

In June, we were authorized to go ahead with the work of designing a large shipyard on the Pacific Coast for Bethlehem Shipbuilding Corporation — this yard was to have been very much larger than Squantum, and was to include a great deal more than Squantum. It included not only the plant for fabricating the ships, but also brass foundry, the steel and iron foundries for making the castings for these vessels.

We had a large boiler plant to design and construct, two large sub-stations with air compressors, rotary transformers, etc., and miles upon miles of compressed air piping, steam piping, water piping, electric conduits, etc., to lay out and write specifications for. It was another case of hustle, and another case of pure enjoyment in spite of the many drawbacks incident to government work.

Some time in October, the Emergency Fleet Corporation cancelled the contract for building the ships which were to have been built at the West Coast plant, and, therefore, our contract for the design of the plant was also cancelled.

While this work was going on Monks & Johnson made a proposition to me to take over the electrical and mechanical work of their office, and I accepted, so that I am now, I trust, permanently located with them at 99 Chauncy Street, Boston, where we retain the better part of the organization we built up for the supervision of the big jobs, and are ready to serve any one in an engineering capacity along almost any line.

Rodolphus Swan, whose address is 80 Walnut Street, New Bedford, Mass.; writes:

Since July 29, 1917, I have been doing nothing more exciting than endeavoring to keep up with the rulings of the Provost Marshal General, one Enoch Herbert Crowder, address Washington, D. C., with relation to the Selective Service Law.

In other words I have been trying to keep a draft board out of Leavenworth and to keep a steady stream of selected men going to training camps, perhaps the most interesting work that ever fell to the lot of any American citizen. It was, I assure you, no vacation, but a long steady grind, with hours beginning as soon as one could pry his eyes open and swallow breakfast, and continuing as long as his eyes would stay open, no Sundays or holidays appearing in red on the war department calendar. Outside of that, I am still doing newspaper work with "The Morning Mercury," and distributing liquor licenses for the city of New Bedford, a task that promises to be over soon. My family status remains the same, one wife, two hopefuls, a pitcher and a catcher, a perfectly good IV A claim, as it is called in the vernacular of the draft. I have played at golf only three times since the draft got me, but I propose to limber up this spring.

No Tech man ought to pass through New Bedford without having a peek at the Jonathan Bourne Memorial, a building located on top of Johnnycake Hill, within which is housed a half-sized whaleship, the "Lagoda." It is well worth seeing and it will soon be about the only typical whaler in existence. Therefore, '97, when you come towards New Bedford, see me and the whaler, if nothing else.

From G. F. Starbuck comes the following modest contribution:

For over twenty years it has been my hope, and the object of my endeavor, to accomplish something that I would be justified in bragging about, but I have not succeeded yet. The nearest approaches have been two inventions of mine which are placed on the market by the Franklin Railway Supply Co., the Radial Tender Buffers which were supplied to all the United States government locomotives and to locomotives shipped to Russia; and the Articulated Tender Trucks, which are being introduced onto several railroads. Use this if '97 class news is so lacking that this is required for killing space.

Mrs. Heard sends the following items of interest about her husband, Henry Heard:

I am writing in answer to the letter to my husband about the class of '97, M. I. T. Mr. Heard enlisted as a seaman, U. S. N. R. F., was called on April 11, and was sent to Eastern Yacht Club, Marblehead, where he trained ten days, was then assigned to yacht "Walay" where he staid till December. Then took examinations for ensign and after receiving his commission was immediately ordered to London, sailing in January, 1918. He has been working at the United States Naval Headquarters, 30 Grosvenor Gardens ever since and is still there and does not know when he will be back but he thinks this month.

A. S. Hamilton has recently changed his address to 19 Liberty Street, New York City. He writes, "no change in business, which is Workingman's Compensation and Liability Insurance, family the same size, three children."

Allen W. Jackson was a special representative of Civilian Personnel Division of Ordnance Department, during 1918, then representative for injured soldiers, Cambridge Red Cross, was about to sail for Switzerland in Red Cross Commission at signing of armistice.

L. S. Cowles, I, was reelected secretary of the Engineers Club of Boston at the last annual meeting of the Club. Cowles started the movement for an engineers club in Boston in 1908 which culminated in the opening of the present clubhouse at the corner of Arlington Street and Commonwealth Avenue on January 25, 1913. The club has about nine hundred and twenty-five members at the present time and is an important feature in the engineering life of Boston and New England. Charles T. Main, '76, is president and Frederic H. Fay, '93, is treasurer.

H. A. Noble writes:

I am doing it now. Am sorry I have nothing of interest to report. Just digging away as usual.

A. L. Parsons, I, is stationed at the Navy Yard, Philadelphia, as Commander of Civil Engineer Corps, U. S. N.

William Cotter is now associated as general superintendent with the J. J. Prindle Co., General Contractors, of Framingham and Boston.

Edgar Hawkins' sole interest in the class notes lies in hearing about the others, witness the following:

I am going to suggest that you make both Frank Feeley and George Wadleigh tell us all of their work on the Emergency Fleet Corporation at St. Louis during this past year.

Edward A. Sumner writes from Pasadena, Cal.

One feels that war service is about the only news fit to print nowadays and I was knocked out by pneumonia trying to change captain in the Quartermaster Reserve into a cavalry commission, so have nothing to report. I was recently put on the board of directors of the American Radiator Company, which I would be willing to shout about if I had done some Hun hunting, too.

Keep up the good work, for we all like to hear about the other fellows.

From O. B. Smith at Vancouver, B. C.:

I did not go to war—for one reason I was too old, and for another reason, I still have the bum leg which kept me from receiving the wonderful military training which was given at Massachusetts Institute of Technology in the year '93. I have, however, been helping more or less in a financial way, and inasmuch as an American living in British Columbia has his income taxed by the Province, the Dominion, and the United States, it would look as though I would be of financial aid to the governments for some years to come, if I happen to live.

In regard to my family: I have a wife and two children, aged eight and thirteen, all of which has been reported before.

We have another Tech man working with us, Howard MacDonald, '07. Aside from Mr. MacDonald and myself, the Tech men in this part of the country are very scarce.

The Granby Company has properties at Valdez, Alaska; Ketchikan, Alaska; Anyox, B. C.; and Phoenix, B. C., and inasmuch as I have to give these properties the look over every so often, I manage to be away from Vancouver the greater part of the year; however, my headquarters are at Vancouver, and will be for some time.

Col. William A. Kent writes from Knoxville, Tenn., where he is Army Recruiting Officer:

I was among the unlucky ones who failed to get across. I was organizing my regiment, the 810th Pioneer Infantry, at Camp Greene, N. C., when the "flu" started, the camp was quarantined for about six weeks and no more men could be received. When the quarantine was lifted the men came, but too late—the armistice was signed before I got them clothed. So they were demobilized December 21, 1918. I had a temporary command for a few weeks, then went to Camp Headquarters as executive officer. I stayed there until February 27 when I went to Knoxville, Tenn., on recruiting duty. I expect to be there for some time. I am out here establishing sub-stations as fast as I can get to the places. Those torrential rains and cloud bursts of the sixteenth put the railroads out of business in this section. The Mississippi and Tennessee Rivers and all of their branches are way up. Day before yesterday we ran through water running like a mill race several inches over the tracks and last night it took us fifty minutes to go nine miles, the second train over that track for four days.

Hugh Moore a few days ago told the Secretary that he had been elected to the National Research Council. He considered same a greater honor than being elected mayor of Boston. He had just returned from Washington, from attending a meeting of the National Research Council, when I saw him.

A. H. Pugh writes from Cincinnati briefly and to the point:

The writer took a position at the Ordnance Department, Cincinnati district, as head of the Loading and Explosive Section and is now assisting the negotiation of the settlement of claims.

Wilfred Bancroft sidesteps the personal question mark, notice the following:

Our genial and highly efficient classmate, Charlie Bradlee, has taken upon himself the duty of gathering class notes for '97, which means that the life of that justly famous class will no longer be "hid under a bushel."

I think you are doing a really worth while piece of work and I will help in any way I can although nothing much happens down here in the country.

John Taylor, consulting engineer with the General Electric Company, writes from Schenectady, N. Y.:

I never mean to throw away a stamped reply envelope. Your communication on yellow paper which you have not taken the trouble to date or place an address on calls attention to lack of '97 Class News in TECHNOLOGY REVIEW.

Of course, plenty of us like to see our name in print but, against this, modesty, reticence and regard for the advertising proprieties deter many from seeking press interviews or feeding "copy" which directs the spotlight in the personal direction.

Replying more specifically to your second paragraph,—

I have taken some indirect part in war activities. My work ever since graduation has at all times been more or less "special." I have been married (once). There have been several increases in the family. I make many trips every year (some short and some longer); and interesting experiences (to me) are almost daily occurrences. There have been several business changes as well as residence changes (none during the preceding year.) No change in business position during the preceding year.

All of these things might be of interest to bring out if chatting with a classmate, but I do not feel that I should send them along with the idea to increase the consumption of paper.

From Franklin Bragg, Bangor, Me.:

I, of course, have done my part in the war and have been busy in various matters. I have hesitated to send the information in, however, as I am rather modest about such things and did not want to appear as blowing my own horn. If it would be of interest to the rest of the class I am pleased to state that I have been elected a Director of the Chamber of Commerce which took a very active interest in all war activities. I also handled the county for the United War Work Campaign and we went over our quota with a very large percentage.

I also belong to the Rotary Club and have the pleasure of being Chairman of the Entertainment Committee.

James G. Moran writes:

Nothing of much importance has transpired in my life during the past year. I will say, however, that I am now a member of the Massachusetts Legislature and I am serving my third term. I am serving as a member of the Joint Judiciary, which is an important committee in the Legislature.

From Harrison Smith and Breed:

Both stayed with the Ground Schools at Tech until they were disbanded. Smith was president of the Academic Board of the Navy School and Breed held the same position in the Army School. The Navy School enrolled 4911 Cadets and graduated to the flying schools 3949. The Army School enrolled 1178 Cadets and graduated to the flying schools 618. The Army School also enrolled 975 officers and privates and graduated 695 as engineer officers.

There were but two other Navy Ground Schools in the country. The one at

Tech was by far the largest. There were seven other Army Ground Schools, but the Engineer Officers' School at Tech was the only one in the country.

Harrison Smith has succumbed to the call of the wilds again and is traveling in the South. He intends to visit the Tropics before returning to civilization next spring.

Walter Humphreys has just been re-elected chairman of the Brookline School Committee and secretary of the Board of Trustees of the Brookline library. He has recently resigned as treasurer of the Junior Red Cross Auxiliary of the Boston Metropolitan Chapter

Mrs. Mary B. Strong writes:

I was only a special student of the class of '97, and so hesitate to reply to your letter, but felt it only courteous to acknowledge it, and tell you my interest is always alive for the M. I. T. My war work was chiefly among the Radio boys of Cambridge, besides the usual work women did in surgical dressings, etc. Within the past year I have become a grandmother, which must make me seem to you quite an elderly lady.

The annual report for 1918 of the E. I. duPont de Nemours and Company makes a very complimentary mention of the work of Irene duPont as chairman of the Executive Committee, which has been primarily responsible for the success of the work as a whole. The gross business of the company during the war period has amounted to \$1,049,000,000, including the cost of construction work. Irene duPont occupies a position equivalent to that of general manager, though not so named. During the four years, 1915-1918 this Executive Committee has held 334 formal meetings and has acted upon 5760 subjects, of which 3886 were embodied in written reports.

Irene duPont writes of himself the following:

Your circular letter referring to the sphinxlike habits of '97 was awaiting me on my return from my trip to Florida, and I hasten to reply, but I have not been married in the last year, nor have I had any additional children, nor have I set the world on fire by any less extraordinary happening.

I am still one cog in the "duPont Machine." You may have heard what that company has accomplished in the war and I would rather be one of a group accomplishing great things, than an individualist getting a good deal of advertising by alone doing things, such as can be done by a man alone.

Is it not that '97 men happen to be group workers, who have recognized that today is a day of co-operation and that it is beneficial to sink your individuality or at least disguise it, in order that the best results be obtained from collective effort? I am not writing this as a defense of '97's silence, nor as a criticism on those who have done extraordinary things and been credited with that accomplishment but only to offer a reasonable theory to explain a phenomenon showing that we '97 men have the true scientific spirit for research.

Walter Spear sends in the following:

I agree with you that the news from our class has been conspicuous by its almost unfeeling absence in the various issues of the Technology REVIEW. I do not, however, blame the men who are busy.

I became interested in the cantonment work first in May, 1917, and in June became Consulting Engineer on the water and sewage disposal layouts at Camp Upton. In October I received a commission as Major in the Quartermaster Corps, and have since been Utilities Officer in charge of the operation of maintenance and utilities in Camp since last summer under the Construction Bureau. During the winter of 1917-1918, I also looked after new construction by contract, and since November 12 have also been Constructing Quartermaster on this project. My family has been with me in Camp since February 18 and my permanent address for the present, at least, is Camp Upton, although I hope to get out this spring. In a month or two I hope my residence address will find me at Merrick, N. Y.

D. H. Witherby has sent in the news of the death on February 23, 1919, of Edwin C. Witherby.

J. W. Smith writes:

For the last three years have been general superintendent of the Gray & Davis Co., Inc., Cambridge, Mass., which did a large amount of munition work—first for the Russians—later for the United States. After the war was over on January first I resigned, and up to date have not connected up with any new proposition.

From 15 East 48th Street, New York City, under date of March 17, Warren Brown sends the following:

From October 30, 1917, until December 19, 1918, I was a captain in the Air Service (Aeronautics)—originally the Aviation Section of the Signal Corps. After being ordered to active duty I first was put through the rather strenuous course of the School for Adjutants at the Ohio State University, Columbus, Ohio, and was then ordered to Taylor Field, Montgomery, Ala.

This was one of the thirty-odd flying fields for the training of pilots, etc. I spent six months at Taylor Field as Post Adjutant and later Executive Officer, and in September, 1918, was ordered to Garden City, New York, for duty as Adjutant of the 344th Aero Squadron one of the big Hawley-Page bombing squadrons then being organized. The armistice was signed just as we were ready to go overseas, the squadron was disbanded and I was honorably discharged on December 19, 1918,

Hugh K. Moore writes from the Boston Engineers' Club:

During the past year I have been on the Chemical Engineering Committee of the Council of National Defence. The duties pertaining to this job took me to many of the chemical centers of this country. At Berlin, N. H., under my direction we furnished more sulphur-monochloride than all the other plants in the United States put together. Sulphur-monochloride is the starting point for mustard. After the armistice I reorganized the laboratory at Berlin. I reappointed Major Richter to be my chief assistant and sent him to the American University to pick the chemists (while the picking was good) which had been collected there by the United States government, so we have more than thirty of the best chemists in the country. Our intention is to make the mills so efficient that when hard times come and orders are few we shall get what orders there are. Have been elected a director of American Institute of Chemical Engineers. Have been urged to run for mayor of Berlin, but refused. Was chosen by the laymen's committee of the Congregational Church in Berlin, N. H., to give a sermon on the subject, "Why the Church Fails to Interest People Enough to Attend." I wrote this in two parts, Causes and Remedy, and gave this in place of the sermon on the morning of February 16, 1900. Have since given it in Gorham and have been asked to give it in Boston. Am now in Boston applying for certain patents on improvements in operation of our mills.

William Binley, Jr., writes:

The last year was a strenuous one for shipbuilders and I am glad to have had the opportunity of working on some of the war material in the shape of destroyers for the navy as well as merchant ships. In May, 1918, the greater part of the technical staff removed from the Fore River Plant of the Bethlehem Shipbuilding Corporation, at Quincy, Mass., to form a central organization, controlling five shipyards, at Bethlehem, Pa. It was considerable of a job to change an organization in the midst of war activities, and considerable travel was required between Bethlehem and Boston on my part for most of the year. As assistant naval architect of the Bethlehem Shipbuilding Corporation I have supervision of the designs of the naval vessels and troopships building by the corporation. This company turned out more destroyers last year than all the other shipyards in this country combined; the first vessel completed last spring has steamed over 40,000 miles and all of them have given a good account of themselves.

We are all trusting that shipbuilding in this country is coming back to its own and that in the future Course XIII and the naval architects will never have occasion to be considered as among the "non-essentials."

From May until the close of the war, Walter B. Russell held a position as district educational director under the War Department Committee on Education and Special Training of the General Staff, which had charge of the Vocational Training Detachments, later known as Section B of the S. A. T. C. During the first part of the time he was acting field director, with headquarters at Washington, and the latter part of the time he was directly responsible for the schools in Ohio, Indiana and West Virginia.

Arthur Elson is teaching Chemistry, Physics, and Mathematics at the Allen Military School, West Newton.

Thomas R. Weymouth sends us the following:

I want to write you a note to let you know that I, for one, appreciate the effort you are making to gather news of our class and to stir up an interest in the matter. While many things have occurred in my life during the last year, of vital interest to me, nevertheless I fear that they would not interest the class, but I will look forward with keen anticipation to the news from the rest of the fellows.

1898

A. A. BLANCHARD, Secretary, M. I. T., Cambridge, Mass.

On the evening of February 13 the ninety-eight men around Boston met at an informal dinner at the University Club. Lansingh and Allyn were with us and we had a mighty thrilling evening listening to their experiences.

Lansingh's war activities cover a wide range. At the outset he served on the Advisory Committee of the Council of National Defense. Soon he started on a special Engineering investigation in the British and French Armies in France. A little later he became director of the Technology Club at Paris. Although this Technology Club in Paris was pioneer in the field of providing a headquarters for college men in foreign service, it was soon imitated and other colleges joined to form the American University Union with which the Tech Club was merged. Lansingh became assistant director and business manager of this larger organization. Lansingh is now back in this country and is works manager of the Metz Co. automobile plant in Waltham which was taken over by the government for building airplanes.

Bob Allyn, major of artillery, was in charge of batteries in the big St. Mihiel offensive and he has probably been under heavier fire than any other '98 man. At one time he was asleep in his headquarters, when he was awakened by the adjutant who stated that heavy shells were dropping around them and they had better get into the bomb proof tunnel. He was too sleepy to take much interest but finally the officer induced him to retreat to cover. The next minute a shell landed in the middle of the building. But anyway, come to the twentieth reunion, one year postponed, and hear Bob and Lansingh tell about it first hand.

The New York men under the chairmanship of Allyn are going to stage this reunion which will take place at New York and the south shore of Connecticut May 29 to June 1.

Clarence Goldsmith is major in the Quartermaster Corps, United States army. He has been connected with the Construction Division of the army since the middle of May, 1917, being advisory engineer on fire protection and also associated as chief assistant with the advisory engineer on water supply on all emergency construction work which has been carried on by the army in the United States and island possessions during the period of the war.

The following interesting item is taken from the Brooklyn "Times" February 6, 1919:

Clifton W. Wilder, formerly of Flatbush, and now a resident of Garden City has resigned his position of electrical engineer of the Public Service Commission which he has held since 1909, and will join the staff of the New York Edison Company. His successor has not been appointed.

Mr. Wilder has been connected with the Public Service Commission since 1907. Two years later he became an electrical engineer. His duties were extended to include all engineering matters coming before the commission pertaining to the equipment of lines constructed under the dual contract and the elevated lines. During the past seven years the bureau of which he has been head has passed on the plans and purchase of equipment amounting to nearly \$100,000,000. He has also had charge of property appraisals of several of the large public utility corporations under the commissioner's jurisdiction. His salary was \$7500.

In 1898 Mr. Wilder graduated from Massachusetts Institute of Technology, and engaged in general engineering work in Boston and New York until 1907, when he entered the service of the Public Service Commission as an assistant electrical engineer.

Word has been received of the death of Michael J. Golden, professor and director of the Laboratory of Practical Mechanics at Purdue University, La Fayette, Indiana. Professor Golden attended the Institute 1896-97, studying in Course II, and was classified with '98.

1899

WILLIAM M. CORSE, Secretary, care Ohio Brass Company, Mansfield, Ohio
BENJAMIN S. HINCKLEY, Assistant Secretary, 177 Park St., Newton, Mass.

David C. Churchill, who was for nearly twenty years in India, is now located in Oberlin, Ohio.

Frank F. Fowle writes suggesting the publication of a class book containing portraits of each member of the class and a concise account of his career since leaving the Institute. He adds that this might be something to have ready for our twenty-fifth reunion. Fowle states that he sees Hamilton, Watkins, Gillson and Huse occasionally and they all seem to be prosperous and busy. He is still in charge of the Central Union Telephone Company, as one of the receivers appointed by the State courts in Chicago some years ago.

G. D. Emerson is at present assistant constructing quartermaster at the Boston Army Supply Base, Boston, Mass. Emerson states that when he gets out of the army he is planning a more or less extended trip west.

Do what you want to with the enclosed check, the only stipulation being that you do not spend it all in one place. Kind of spread it around so it will be put into circulation where it will do the most good. Now, of course, if we were in Germany I would not think of sending such a thing to you. It would need to be a "sinker" because "over there" a "scrap of paper" is de trop (now what the Hell does that mean?) but with us it stands as a "gentlemen agreement" that I have at least the value of one dollar in the keeping of the firm who had the nerve to print such a thing. Of course, it is understood between you and me that the possession of the value of that amount is now relinquished on my part and that of my own free will and without any coercion on your part, I have said to it a fond and lingering "fare-ye-well."

New York, by all means. Headquarters at Coney Island. Month of July. The Fourth comes on Friday—so you can say from the 3d to the 6th (Sunday), and we

can all get home, rather back to the job, on Monday morning. Our money will be all gone by that time and we will have to go.

Think it over. What's that? Class News? Happy is the country which has no History. (Arlo Bates.)

Come again.

E. Hosmer Hammond writes that he has just taken a position with the Dupont Company at the Harrison Works, Philadelphia, Pa. This plant manufactures paints and varnishes.

W. W. Bonns writes, stating that he has completed his graduate work at the Missouri Botanical Garden and is now taking his Ph.D at Washington University. He is now director of the Botanical Research Laboratories of the Eli Lilly & Company, manufacturers of pharmaceutical and biological products.

Arthur B. Foote, who is with the North Star Mines, Grass Valley, Cal., writes the following interesting letter:

The job of mine superintendent is such a hard one to get away from that I do not believe I can go east to the proposed Class Reunion. I should think it to be a highly desirable plan, nevertheless, and hope the class makes a success of it.

I married nearly six years ago and now have two little girls. It is a very pleasant country here, well covered with pine timber and a perfect climate. Being 2400 feet above the sea, it is not so hot and dry as the valley, at the same time it is not high enough to get much snow and cold weather.

The North Star Mine is a large one, the main incline shaft being now 6300 feet long, with a vertical depth of about 2300 feet. There are plenty of engineering problems connected with the work, and I have never regretted taking the Civil Course rather than the Mining. A mine is constantly outgrowing its plant, so there is construction work going on most of the time, such as new hoisting works and bins, pumps, compressors, mills, etc. In 1915 we equipped one of the shafts with new hoisting engines, headframe and bins, and made the change without even stopping the hoisting for longer than eight hours, maintaining an average of three hundred tons of ore a day throughout the change.

The year 1917 was a bad one for all gold miners, this one included. Everything high in price, and not enough labor to keep the mill going. Furthermore, the managing director of the company, Mr. Hague, enlisted in the O. R. C. and died of pneumonia in France.

Being off on a side-track as I am, I do not see Tech graduates very often. I have run across Conrad Loring once or twice. Last time I saw him he was with one of the big oil companies.

Alexander R. Holliday sends a pamphlet giving an account of his work as assistant fuel administrator for Indiana. Holliday is treasurer of the Publication Service Company. He is also president of the Noblesville Heat, Light and Power Company; president of the Indiana Railways and Light Company; secretary-treasurer of the Oakland Coal Company; treasurer of the National Concrete Company and a director in a number of Indiana's manufacturing organizations. Holliday has been at all times closely identified with the public utility fields.

Thomas P. Robinson writes as follows:

I think you owe any architect an apology when you ask him what he has been doing for the last year. Most of the architects are dead and some of them are buried and those that are not dead and buried have been working for the government which is an abridgment of personality equal to being dead,—therefore all of the architects are dead Q. E. D.

I myself was in the process of going down into the earth but I discovered a ram hole to the surface and saved myself by crawling up. A certain leather concern had need of being moved from one building to another building and of having the other building altered and equipped for the moving. In the process of supervising this work I learned the following things about leather soles:

All soles are divided into grades, there being as many grades as there are letters in the alphabet and all grades are divided into an average of six kinds. These kinds are called "irons" and the iron is measured as to thickness. Grades or qualities are determined by the thickness and other characteristics of the various kinds of cows,—some of which are steers. We have light cows (and this refers to weight not complexion) medium cows, heavy cows. We have also light steers, medium steers and heavy steers. Steers are mostly from other parts of the country or other countries,—Boston being conservative in the matter of jokes. Soles are also divided in the matter of tannage,—there being hemlock tanned soles, cut tanned soles and a cross between the two which is called something else that I have forgotten.

I hope this will be of interest to any of the class that are thinking of going into the sole business.

Lawrence Addicks spent most of last year abroad. He returned from a trip around the world last fall. He writes that he spent some time in Burma and India for the Burma Corporation. He acted in the capacity of consulting engineer. At the present time he is designing a zinc smelter near Calcutta and a copper refinery to be built in Spain. Addicks says that he spent four months in the war zone, partly on work connected with the Naval Consulting Board and had many experiences including being torpedoed in the Mediterranean.

Frederic Tappan is located with the British Columbia Electric Railway Company, Ltd., of Vancouver, B. C. He writes that he is so busy that he has hardly time to turn around and does not see how he could attend a class reunion this year. He says that he very much wishes that he could be present at a reunion, because men from the Massachusetts Institute of Technology are very hard to find in Vancouver. The last one he saw was Frank Fowle. This was almost seven years ago.

C. Gardner Barry writes from Sandwich, Mass., that since September, 1917, he has been working on the Cape Cod Canal after a lapse of three years. At present he is wondering what will happen after the government purchases the property.

Burt R. Rickards is now assistant to the deputy commissioner, New York State Department of Health, located at Albany, N. Y. He is editor of a very interesting pamphlet called "Health News" which serves as a monthly bulletin of the New York State Department of Health. Rickards has recently been made one of the assistant editors of the "Abstract Journal of Bacteriology" in charge of the Public Health Bacteriology.

The secretary had a very interesting visit with Clifford Swan in New York last month. Swan is doing some very excellent work in architectural acoustics and is considered the leading authority on the subject in the United States at the present time.

The secretary also spent a very pleasant evening at the Chemists' Club last month with Earle B. Phelps. Phelps is moving to New York to take up consulting work. His experience with the government practically assures him of a successful practice.

The secretary mailed a circular letter with the bills for class dues, asking for the opinion of members of the class as to the advisability of holding a twentieth class reunion this year. Numerous replies have been received. The answers from these will be tabulated and the results written to the members of the class. There are quite a number of men who are very anxious for such a reunion. The suggestion has been made that a reunion be held at the Lake Placid Club, Lake Placid, N. Y. A cottage could be secured at that club where all the men could room together and take meals at one of the central clubhouses. Those of our members who have been at the Lake Placid Club know the facilities for all outdoor sports that the club affords. Golfing, tennis, rowing, mountain climbing and picturesque walks are available to every one.

Every member of the class is urged to send in to the secretary his opinion regarding such a reunion for this year.

The secretary wishes to state that the notes in this number of the REVIEW are largely the result of answers to the letter asking for the opinion of the members of the class regarding a class reunion next summer. It is very gratifying to be able to report from so many different men.

1900

INGERSOLL BOWDITCH, Secretary, 111 Devonshire Street, Boston, Mass.

On Saturday, March 1, the class held an informal meeting at the Walker Memorial, where class matters were discussed.

It was decided to do nothing about publishing an account of the war records of the members until the Alumni Association had decided what it was going to do. A class dinner was planned and this will probably take place some time in April. Sixty postals were sent to the members of the class living in and near Boston, and the following members attended the alumni dinner: Batcheller, Bowditch, Brigham, Bugbee, Conant, J. B. Davis, C. J. Dunbar, Fitch, Howe, Jennings, Reardon, Remington, Russell, Sperry, Wastcoat, Ziegler. Unfortunately some of the fellows did not buy their tickets until the afternoon of the dinner and not enough seats at one table were available, so that some had to sit with other classes. We hope that room will be available next year so that all the class can sit together. The dinner was a great success, but all regretted that Lansingh was not given time to tell about his work in Paris, which Gibbs has been carrying on with such great success. It has been suggested that Gibbs be made field secretary of the Alumni Association as soon as his work in Paris is finished.

Russell has been asked to take charge of the Junior Plattsburg this summer. As soon as his plans are made perhaps he can be induced to give an account of what this work is.

Neall called up about the middle of March to say that he expected to give up his work in Washington and return to his regular work as a consulting engineer about the middle of May. He has had a great deal of experience in his government work, and contact with men from all parts of the country has been of great interest to him.

George W. Cutting, Jr., has been commissioned captain in the Engineers Reserve Corps and is stationed at Portsmouth, N. H., as material engineer for the Atlantic Corporation, builders of eighty-eight hundred ton steel ships.

Warren C. Tudbury has returned to California and is now at the Mare Island Navy Yard. In 1916 he left Los Angeles and took a position at Washington with the Bureau of Yards and Docks. In a letter of March 8 to Bowditch, he writes:

While there a daughter, Patricia Breed Tudbury, was born to us on March 8, 1918. We named her Breed because she was born on my greatgrandfather Breed's birthday. He, Holton Johnson Breed, was commander of the private armed brig of war "Grand Turk" of Salem in the War of 1812. Little Patricia is celebrating her first birthday today. California agrees with her, as she weighs twenty-five pounds and has a crop of eight teeth.

Last May his lease expired and as he was unable to find an abiding place in Washington, he asked to be transferred to the Mare Island Navy Yard, where he

has a position of expert aide. While in Washington he frequently saw Thurber, Southwick, Cooke and Stratton.

Everett has been elected president of the New Hampshire Highway Association.

The following are the latest changes in addresses:

Mr. Clarence C. Brown, 154 West Hortter Street, Mount Airy, Penn.; Capt. George W. Cutting, Jr., 160 Middle Street, Portsmouth, N. H.; Maj. James C. Heckman, 196 Soldiers Place, Buffalo, N. Y.; Mr. Lewen F. Searle, Allaben, Ulster County, N. Y.; Maj. Charles E. Smith, 2075 Railway Exchange Building, St. Louis, Mo.; Mr. Frederick W. Snow, care U. M. H. K., Elisabethville, Katanga, Congo Belge, Africa, via Cape Town and Rhodesia; Lieut.-Col. George S. Tiffany, 1162 4th Avenue, Louisville, Ky.; Mr. Warren C. Tudbury, Public Works Office U. S. Navy Yard, Mare Island, Cal.

1901

ROBERT L. WILLIAMS, Secretary, 107 Waban Hill Road North, Chestnut Hill, Mass.

The following men of our class attended the annual meeting of the Alumni Association in the Walker Memorial: Brigham, Bittering, Chandler, Appleton, Dennison, Read, Taft, Walker and Williams. War experiences were talked over and an enjoyable evening spent inspecting the new Walker Memorial and listening to the after dinner speeches.

James F. Monaghan is now a major and is on the Peace Commission, chief of the Textile Section to appraise war damages by the Huns to all textile plants in France and Belgium. The secretary has recently received a letter from him from France in which he says:

I have some 3600 plants to appraise. Will be home when the shadows are getting long again. Have been all over France so far and part of Belgium. Saw the worst destruction I could ever imagine, will be glad to tell you about it later. Haven't seen any of our classmates over here. Billy Aldrich was a captain at Tours but has gone home long ago. I saw Leonard Wood; by the way, he is a major. Give my best to all the boys when you see them.

Stanley C. Sears who received his commission as captain only a few days before the armistice, has been discharged from the engineers and is now in Cambridge, Mass.

News of the death in France of Capt. William W. Walcott has recently reached us.

John F. Wentworth, XIII, died from influenza December 20, 1918 at Rochester, N. H.

According to Peter O. Knight, vice-president and general counsel of the American International Corporation, the American International Shipbuilding Corporation is endeavoring to obtain the services of Matthew C. Brush as successor to Frederick Holbrook who has tendered his resignation as president.

Since our brief notice of Edward B. Cook's death in the October REVIEW, we have received the following clipping from the "Iron Trade Review:"

Edward Bailey Cook, assistant manager of the blast furnace department of Pickands, Mather & Co., Cleveland, died October 13, at his home in Cleveland following an attack of influenza, which developed into pneumonia. Mr. Cook had

been identified with the Pickands, Mather interests since November, 1912. Previously he had been connected with the Warwick Iron and Steel Company, Pottstown, Pa., where he had obtained a very extensive blast furnace experience in association with his father, the late Edgar S. Cook, who organized and became president and general manager of the Warwick Company, in 1899. Mr. Cook was thirty-nine years old, having been born in Pottstown, in 1879. He was graduated from the Massachusetts Institute of Technology and his first position was that of firing the boiler of the Warwick Company. Through various promotions he rose until he was general manager of the Warwick blast furnaces when he resigned to become affiliated with Pickands, Mather & Co. He leaves a widow and four children, his mother and two brothers. One of the latter is a lieutenant in Great Britain's aviation service and the other is a captain in the medical reserve corps which was sent on a diplomatic mission to Armenia and Persia.

Mr. Cook was one of the well known and most highly regarded blast furnace men among the younger school of blast furnace operators in the country. He was a man of very progressive ideas and through the exercise of this trait largely made the Warwick furnace blast one of the most productive and best equipped merchant properties in the east. He was a member of the American Iron and Steel Institute and of various clubs at Cleveland, Toledo, Erie and Canton, Ohio. Interment was made at Pottstown, where his mother resides.

Notice has been received from Mr. and Mrs. Henry C. Marcus of the birth of a daughter, Virginia Marcus, December 12, 1918.

W. S. Pepperell is still with the Draper Company and during the war has been very busy, part on actual government service in aid of textile production, ducks, uniforms, etc., and production of machinery for same. He has been responsible for raw materials for the Draper Corporation which was almost entirely on government work.

T. H. Taft, assistant professor of Mechanical Engineering at the Massachusetts Institute of Technology has been giving instruction in the United States Shipping Board School for Engineer Officers in addition to his regular work.

George M. Spear died October 4, 1918, in Philadelphia.

W. J. Sweetser, professor of Mechanical Engineering at the University of Maine, has also been educational director for the University of Maine Training Detachment for training enlisted troops as auto mechanics, gas engine mechanics, blacksmiths, carpenters, electricians, and machinists.

The following recent changes in address have been received:

Lieut.-Com. Ralph Whitman, Santo Domingo City, Dominican Republic, care United States Military Government; Alexander J. Taylor, 1900 Van Buren Street, Wilmington, Delaware.—T. F. Lange, Turner Construction Company, New York, N. Y.—Lieut.-Com. F. B. Driscoll, 15 Dey Street, New York, N. Y.—J. D. Evans, 1 Leighton Avenue, Yonkers, N. Y.—H. R. Gibson, care United States Rubber Company, 58th Street, and 11th Avenue, New York, N. Y.—W. J. Sayward, 609 Chamber of Commerce Building, Atlanta, Ga.—M. C. Brush, American International Corporation, 120 Broadway, New York, N. Y.—W. F. Davidson, 5743 Walnut Street, Philadelphia, Pa.

1902

FREDERICK H. HUNTER, Secretary, Box 11, West Roxbury, Mass.

J. ALBERT ROBINSON, Assistant Secretary,

Care Federal Board of Vocational Training, Washington, D. C.

On the evening of February 15, twelve classmates assembled for dinner at the United States Hotel, Boston, to hear Maj. Lewis E. Moore tell of his experiences in

the Engineer Corps in France. Those present were, Fitch, Arthur Sawyer, Fisher, Burt Philbrick, Collier, "Doc" Williams, Hunter, Mahar, Galaher, Robert Whitney, Boardman, Hamblet. After the menu we sat around the large table, Moore talking far into the evening in a familiar way that held interest. There were many intimate details brought out in the free and easy talk that would have been missed in a more formal affair, and all felt well repaid and very grateful to Moore for giving us such an insight into affairs on the other side.

On the evening of March 1, the following classmates attended the annual banquet of the Alumni Association at the Walker Memorial, it being the largest delegation of the class which had been out at such a meeting for many years. "Bob" Whitney, Moore, Haskell, Arthur Sawyer, Galaher, Upham, "Doc" Williams, Boardman, Kellogg, Ritchie, Teague, Fitch, Collier, Hunter were at the dinner. Bert Sherman and Jack Marvin called in at the building during the afternoon but were unable to stay for the dinner. Those on hand in the afternoon to inspect the building tried out the bowling alleys with the result that Sherman took the honors for the class with 99 at candle pins.

Les Millar is with the Mark Manufacturing Company, Conway Building, Chicago.—Martin Hamblet is at present located in Lowell, his address being 62 Robbins Street, but expects to return to his home in Winchester, Mass., within a few months.—McKechnie is with the New Jersey Zinc Company, Franklin, N. J.—Ike Reynolds has returned to Foxboro after an extended stay in the Adirondacks where he fought off a threatened attack of tuberculosis.

Arthur Sawyer has located in Boston with Hooper, Kimball & Williams, Investment Securities, 35 Congress Street, his present residence address being 689 Massachusetts Avenue, Cambridge.—Archie Gardner is yard manager with the A. Bentley & Sons Company, Jacksonville, Fla., and is busy building concrete ships.—Charles Kellogg is now connected with the home office of the Stone & Webster Management Association, but he hardly got acclimated to Boston before the tangled affairs of the Interborough called for his expert services in New York.

Jack Marvin is with the Holtzer Cabot Electric Company, of Boston, his residence being, 142 Middlesex Road, Brookline.—James L. Taylor, Jr., is reported from 55 East 86th Street, New York.—Fitzgerald's address is 546 Forest Avenue, River Forest, Ill.—E. C. Reeder is with the Lidgerwood Manufacturing Company, 1917 Fisher Building, Chicago.—Alsborg has moved his office to the Tribune Building, Chicago.—Stillings is captain in the Ordnance Division, located at Bridgeport, Conn.—Brainerd is with the Russell Manufacturing Company of Middletown, Conn., his residence is in the town of Portland, just across the Connecticut River, address being Box 644, Portland, Conn.—Lombard is in Fresno, Cal., his address being the Rowell Building—Bob Edwards has crossed the continent, and is now a consulting chemical engineer with office at 69 Fulton Street, Boston.—Comins has been advanced to the rank of major in the 70th Infantry and when last heard from was at Camp Funston, Kansas.—We understand that Comins has been decorated for distinguished service on the other side.—Bert Haskell has returned from Argentine and is now located with the E. B. Badger & Sons Co., 75 Pitts Street, Boston.

Classmates will learn with deep regret of the death of Antonio M. Lage, at his home in Rio de Janiero, on October 20, from influenza. Lage had been in Rio for many years with the family interests. We had word some time ago of his marriage, and the birth of two sons, Antonio A., and Alfredo, but he has not been heard from directly for many years.—Word has also been received of the death of Arthur Channing Clapp, on February 4, 1919, but no data as to the cause of his death. Clapp had been associated with the engineering forces of the city of New York, located

at Burrough Hall, New Brighton, Staten Island, when we last heard from him. He married in 1907, and had one son, Richard Channing Clapp, who was born June 19, 1908, and a daughter, Florence M. Clapp, born May 17, 1912. Previous to being with the city of New York, Clapp was on the Catskill Aqueduct Work, and before that, with the Ordnance Department at the Sandy Hook Proving Grounds.—George Morton Spear, who graduated in '02, but who was affiliated with '01, died on October 4, in Philadelphia. Spear had been associated with the Cramp Shipbuilding Works for many years.

1903

MYRON H. CLARK, Secretary, 1790 Broadway, New York, N. Y.

RALPH H. NUTTER, Assistant Secretary, Box 274, Lynn, Mass.

Following is an extract from the Boston Evening "Transcript":

Capt. George C. Capell, whose home is in Watertown, and who has just returned from France, where, as a member of the 101st Engineers he saw all of the active service participated in by the Yankee Division, has been assigned for duty to the headquarters of the Northeastern Department where he reported this morning.

Captain Capell is the son of Major J. F. Capell, who as an officer of the 16th Massachusetts was in service throughout the Civil War. He is also the nephew of Brigadier General M. C. Capell retired, who, for many years after the Civil War, was in the adjutant general's office. Captain Capell is a graduate of the Massachusetts Institute of Technology and was a master gunner in the old Massachusetts National Guard.

The following is a clipping from the "Electric Railway Journal":

J. W. Welsh, recently on the staff of A. Merritt Taylor, manager of passenger transportation of the Emergency Fleet Corporation of the United States Shipping Board, has become connected with the American Electric Railway Association as special engineer to conduct studies and investigations of special subjects. He will have charge of the information service of the association, and will be located in New York. Mr. Welsh entered upon his duties on December 16. Before he was called to Washington by Mr. Taylor to assist the government, Mr. Welsh was electrical engineer and traffic agent of the Pittsburgh, (Pa.) Railways, with which he became associated in 1906 as assistant electrician. In 1910 he was made electrical engineer and in 1913 took charge of the traffic department of the company. Prior to this time he was employed as an electrical engineer by the National Tube Company, Wheeling, W. Va., and also by the Westinghouse Electric & Manufacturing Company at East Pittsburgh. He was graduated from Wittenberg College in 1900, Harvard University in 1901 and Massachusetts Institute of Technology in 1903. Mr. Welsh assisted on Mr. Taylor's staff in providing transportation facilities and abating deficiencies, where such existed, to the various shipyards on the Atlantic and Pacific Coasts. Since 1914 he has been chairman of the power generation committee of the American Electric Railway Association.

CHANGES OF ADDRESS

Louis W. Adams, Ashland Iron & Mining Co., Ashland, Ky.—Lt.-Col. Horace S. Baker, 6657 Greenview Avenue, Chicago, Ill.—Charles S. Cole, 320 Penobscot Building, Detroit, Mich.—Montague Ferry, 158 Sterling Road, Toronto, Canada.—

Richard M. Field, 62 Pierrepont Street, Brooklyn, N. Y.—Maj. Richard M. Lawton, 681 Orange Street, New Haven, Conn.—Harry R. Low, 806 Marion Street, Denver, Col.—Harold L. Norton, Arizona Commercial Co., Globe, Ariz.—Thomas E. Sears, Ives, Baird & Sears, 10 High Street, Boston, Mass.

1904

HENRY W. STEVENS, Secretary, 51 Wallingford Road, Brighton, Mass.

AMASA M. HOLCOMBE, Assistant Secretary,
610 Boatmen's Bank Building, St. Louis, Mo.

At the annual alumni dinner our class was represented by a "baker's dozen." So far as is known at present no bad luck has resulted from the fact that thirteen sat down at the table which had covers laid for ten. It was close quarters, but those present were thus able to get into more intimate contact with each other than would otherwise have been the case, and no one minded it a bit.

Although A. P. Porter arrived at the Walker Memorial early, Al preserved his reputation by being the last man to arrive at our table. Previous to the assembly in the dining hall he gave an exhibition of athletic ability by gracefully traversing the flying rings in the gymnasium without mishap. Charley Haynes proved that he still possesses that wonderful tenor voice, which made him famous during his student days. In the words of Newton Newkirk "A pleasant time was had by all," swapping yarns and experiences. Those present were: Stebbins, Kendall, E. H. Russell, Haley, Porter, Hayward, King, Munster, A. G. Drew, Todd, Haynes, P. S. Sweetser and Stevens.

Homer is at present connected with the Fore River Ship and Engine Co., at Quincy, Mass.

A letter from Lee Phillips states that he makes his headquarters with the National Radiator Company, at 215 Wood Street, Pittsburgh, Pa., and that any Tech man coming that way will be given a hearty welcome.

Hiller called on the secretary recently, he is connected with the Hartford Fairmont Company, at Hartford, Conn., as installation manager. H. E. Peiler is also with the company as experimental and development engineer. Peiler leaves shortly for a trip to Europe for the company. This company manufactures glass bottle machinery.

A letter from Mrs. Charles J. Conway brought the sad news of the death of another member of our class, Charles J. Conway, who died from influenza on November 10, 1918, at their former home, 2126 Brown Road, Cleveland, Ohio.

Additions to our lists of class members who served our country in the great war are as follows:

Emmet Cockrill, 1st lieut., Ordnance Corps, assigned to duty as Plant Supervisor, Ford Motor Car Company, Highland Park, Mich.

Howard Moore, major, Medical Department, U. S. A. Major Moore was promoted from the rank of captain on February 26, 1919 as a reward of merit for excellent work. He is in charge of the convalescent camp in Mesves Hospital Center, France, having been transferred from Base Hospital 44, one of the Massachusetts Homeopathic hospital units. His home is at 310 Bellevue Street, Newton, Mass.

and he is orthopedic surgeon at the Newton Hospital and sailed with their unit as captain, July 5, 1918.

A. L. Coupe, assistant superintendent of construction, sewers, and water department, United States Explosives Plant Company, Nitro, West Virginia.

A. W. Bee, Jr., (now with Leonard Construction Company, Chicago) January to June, 1918, engineer in charge Area B (Sulphuric Acid Department) United States Explosives Plant C, Nitro, West Virginia. July to September, 1918, engineer and purchasing agent, for the United States Contract Sulphuric Acid Plants at Cuba City and Benton, Wisconsin. October to December, 1918, construction manager, United States Sulphuric Acid Plant, Emporium, Pa.

1905

GROSVENOR D' W. MARCY, Secretary, 246 Summer Street, Boston, Mass.

CHARLES W. HAWKES, Assistant Secretary, 25 Saxon Road, Newton Highlands, Mass.

The secretary is back on the job again, and is gradually getting reaccustomed to the feeling of floppy trousers instead of "putts." He saw some mighty interesting work in Washington, beginning in the Military Intelligence Division, and was fortunate enough to be under Maj. Grafton Perkins, '05. Perk was in charge of a wholly new branch of the work, which under his leadership demonstrated its importance to such an extent that it was formed into the Morale Branch of the General Staff, Brig.-Gen. E. L. Munson being put in charge and Perkins continuing as executive officer. The full story of this work may sometime be told, but at the time of the armistice it was just effectively getting under way. The changed conditions of course caused a complete change of plans, but rather accentuated the importance of the work, which is being pushed with full force in this country in spite of the difficulties of demobilization and rapidly changing personnel. Perkins' rise in less than a year from a second lieutenant to a majority is one more honor for '05.

While the secretary has been away, the class business has been efficiently handled, and the REVIEW news written (as most of this lot was) by the assistant secretary and others of the loyal '05 bunch in Boston. These choice spirits got up a dinner which was said by those present to be one of the most successful class gatherings ever held. The secretary got a notice of it before leaving Washington, which said that he and Major Perkins were scheduled to attend. Greatly to their regret, the date conflicted with a snowshoeing trip that had been arranged long ahead on the event of Major Perkins' and another officer's first leave of absence for over a year. (The three of us had a great week at Wonalancet, N. H., in spite of missing the dinner.) A brief account of the dinner from one of those present follows:

Thirty members of the class of '05 dined together at the Boston City Club, January 18. Professor Warren K. Lewis, who has recently returned from France, was the principal speaker. He gave a most interesting talk on the offensive and defensive use of gas in modern warfare.

Among other speakers were Lieut. Henry H. W. Keith, who told of his work at the Boston Navy Yard; Ensign Francis Hartley, who was at the Tech Aviation School, told of his experiences both here and across; Commander Tower, who told, in an interesting manner, of the naval work which was going on at the Institute.

"Billy" Green spoke on the use of mustard gas and "Hub" Kenway gave a most interesting account of the war work of the United Shoe Machinery Company.

"Ross" Davis was toastmaster, Charles W. Hawkes presided and Andy Fisher was in charge of arrangements.

The President of France has recently conferred the Cross of the Chevalier of the Legion of Honor on Professor Selskar M. Gunn, the honor being awarded for his extraordinary services in the fight against tuberculosis in France. Professor Gunn is now located at 109 Burnett Street, East Orange, N. J.

Lieut.-Com. Robert F. Luce is navigator of the U. S. S. "Madawaska" engaged in transport duty. His home address is Apartment 311, Wardman Courts West, Washington, D. C.—Capt. Hallett R. Robbins is now in Russia.—Capt. Robert S. Beard's present address is 1929 18th Street, N. W., Washington, D. C. This information was furnished by Mrs. Beard.

The following has been received from Mrs. Louis E. Robbe:

Maj. Louis E. Robbe has been "over there" since December 26, 1917. Is now on the staff of the Third Army Corps in Germany, as chief gas officer, having charge of all offensive and defensive gas warfare of that corps since July, 1918. Was first in command of the 1st Battalion, 30th (Gas and Flame) Engineers up to July. Is now in the Chemical Warfare Service. Will write later for REVIEW.

W. F. Harrington of Wilmington, Del., in writing his regrets at missing the class dinner, says:

This should be the year for a grand celebration. The war is over and we have much to be thankful for. Some of us who have been working very strenuously for the past four years, in the manufacture of powder, in order to assure the ultimate defeat of the Hun, do much appreciate the close-up. However, our job is not quite completed, and until such time, the pleasures of the class dinner will have to be foregone.

On January 18, at the same time the '05 men were eating dinner at the City Club, Chester Allen was going through the marriage ceremony, thereby joining the ranks of the fortunate ones. He has been with the Ordnance Department of the United States army at Amatol, N. J., helping build a shell loading plant, but is now released and is with the Foundation Company, Woolworth Building, New York City, which is building ships for the United States government and the republic of France.

William D. B. Motter has resigned as manager of the Benson Mines Company to join the staff of Guggenheim Brothers, as assistant consulting engineer with headquarters at 120 Broadway, New York City. For the next few months he will be in South America.

Bob Turner is now engaged in the general practice of law with Henry Herrick Bond, formerly Income Tax Deputy of Massachusetts. They have opened offices in the Kimball Building, Boston.

An interesting letter has been received from George B. Jones of Chicago, relating instances which took place during a western trip and stating that he saw Leonard Bushnell while in Seattle and found that he was one of the leading lights of the town, being at present at the head of Armenian and other Eastern relief work, vice-president of the Arctic Club and an ex-president of the Rotary Club. George says:

Perhaps the "ex" will be explained by the fact that, while president, he made a special effort to secure as a speaker a "hero of Vimy Ridge," who gave a talk about

his experiences that moved everyone to tears and prompted Bush to suggest that a collection be taken to assist the hero's wife who was in a hospital in some distant place. This was done, but some time later it appeared in some eastern paper that the alleged hero had been a cook in some Canadian regiment and had been fired out before the regiment went to France.

He concludes by saying that on the way from Seattle to Vancouver he ran into Joe Daniels on the steamer.

A few days before Jones' letter arrived, one was received from Joe, himself, relating in a humorous vein his meeting with George. Joe suggests that an article on "Wild Game Birds of the Pacific," illustrated with photos by the author, would be excellent reading from the pen of George B. Jones of Chicago. This is a travesty on Jones' attempt to photo the scavenger gulls that followed their boat.

E. Logan Hill, secretary of the United States Shipping Board Commission on Port and Harbor Facilities, has resigned and become associated with Heyl & Patterson, Inc., contracting engineers of Pittsburgh, Pa. Previous to his appointment as an official of the Shipping Board, Hill was assistant general manager of the Erie Railroad. He will be located at the Heyl & Patterson, Inc., Sales Office, 90 West Street, New York City, which is particularly interested in the application of their cranes to wharves, cargo handling and other special purposes.

H. A. Wentworth writes that while in Fort Worth in February he met George Fuller, who is with the Roads Department of the United States government, studying in conjunction with the state of Texas, the road requirements of that section. Wentworth adds:

In spite of the surplus of marriageable ladies, George apparently hasn't been able to locate one who suits him. No—this isn't an "ad."

The class of '05 learns with regret of the death of Sidney A. Smith, Jamestown, N. Y., who died at St. Petersburg, Florida, February 13, 1919.

A. M. Dean, vice-president and chief engineer of The Templar Motors Corporation of Cleveland, has been another winner of the war.—His company has been making 155 mm. shells and he says that he can justly say that in so far as was possible they have done their bit.

Fred W. Goldthwaite has been elected a director of the Burnett-Larsh Sales Company, Inc., of New York and re-appointed New England manager.

CHANGES OF ADDRESS

Carl T. Humphrey, 638 South 57th Street, Philadelphia, Pa.—Louis C. Winship, 55 Quincy Street, North Adams, Mass.—Charles E. Broad, 192 Duncan Street, San Francisco, Cal.—James I. Banash, 30 East 42d Street, New York City.—Frederick H. Andrews, Southwestern Graphite Company, Burnet, Texas.—Joseph H. Brown, Jr., 413 Peoples Gas Building, Chicago, Ill.

1906

C. F. W. WETTERER, Secretary, Box 168, Tampa, Fla.

JAMES W. KIDDER, Assistant Secretary, 50 Oliver Street, Boston, Mass.

In a letter to Postmaster-General Burleson Theodore N. Vail, president of the American Telephone and Telegraph Company, announces the most recent practical

application of the work of the technical staff of the Bell system, namely the development of a system of multiplex telephony and telegraphy. By this system five telephone conversations can be carried on over a single pair of wires, also eight times as many of high speed printer telegraph systems, or ten times as many of the ordinary duplex telegraph circuits can be obtained than are obtainable under existing methods.

Mr. Vail's letter gives credit to the technical staff of the Bell system for these new developments, mentioning particularly the work of seven men of the engineering department of the American Telephone and Telegraph Company and eight men of the engineering department of the Western Electric Company. O. B. Blackwell is included among those of the former organization and B. W. Kendall appears in the list of the Western Electric Company.

Blackwell is a Course VI man who has been with the American Telephone and Telegraph Company since graduation, and is now the Transmission and Protection Engineer of that company.

Kendall is a Course VIII man. After receiving his degree he spent two years at the Institute as an assistant in Physics and five years studying at Columbia and teaching at that university and at Barnard. In 1913 he joined the engineering staff of the Western Electric Company and has since been engaged in work upon the important improvements in telephone transmission developed recently by the engineers of the American Telephone and Telegraph Company and the Western Electric Company.

Clarence Lasher, VI, who was with the Pawtucket Gas Company, writes that he is at present with the Puget Sound Traction Light and Power Company at Bellingham, Washington, where he is superintendent of the Gas Department.

The marriage is announced of Miss Annetta Richardson Fairlamb and Percy Ethan Tillson at Philadelphia on January 31, 1919. Mr. and Mrs. Tillson will reside in Germantown, a suburb of Philadelphia.

Eight members of the class were present at the annual alumni dinner held in the Walker Memorial on March 1. Joe Lawton, wearing the uniform of a major in the Engineers Corps, was on from Washington. Burton Kendall arranged a business trip from New York in order to lend his presence to the occasion. H. T. Gammons, II, who is now with the Hamel Shoe Machinery Company, in Haverhill, celebrated his return to this part of the country by renewing his class associations at the dinner.

In the circular letter recently sent to all members of the class, a form was included for obtaining individual war service records. Many of these forms have been returned, and they contain much information of interest to all members of the class. It is hoped that this information can be included in a small book or pamphlet and issued as a War History of 1906. Any one who has not yet sent in his war service record is urged to do so as soon as possible.

The 1906 Notes in the January REVIEW contained a brief notice of the death of Jorge Lage upon October 20, 1918, from influenza. Lage was born in Rio de Janeiro, Brazil, December 31, 1882. Before entering the Institute he had studied in Europe preparing for Tech at the Gymnase Cantonal de Neuchatel, Switzerland. At the Institute he was an active participant in class affairs and one of the most popular members of 1906. He was particularly noted for his ability as a fencer and for three years was captain of the Institute Fencing Team. In his senior year he was a member of the Class Day Committee. Lage received his degree in Mechanical Engineering and then returned to Brazil to enter the shipbuilding business with his father. He remained in this business until his death. Harold Coes, who was as close to Lage while he was at the Institute as any member of the class, writes as follows regarding him:

It is needless to say that I was greatly shocked to learn of the death of Lage. I used to keep in touch with him and hear from him every couple of years. I think it has been over a year and a half, possibly two years, since I heard from him. At that time his father had died. This was before the United States entered the war, and part of the burden of conducting the ship repair yard and other interests left by his father at Rio Janeiro had fallen on Jorge's shoulders, and he said at that time that the financing of the business was becoming increasingly difficult in Brazil and that he had his hands full. Of course, I have not seen him since we graduated. At that time he gave promise of growing up to be an extremely able, useful and broad-minded citizen. I remember distinctly discussing with him in his room one night some of the problems of his own country. Jorge had travelled a good deal. He had been educated in London and Paris, I believe, prior to his coming to Tech, although he had several brothers who had been to Tech before him. In the course of our discussion regarding the internal affairs of Brazil I asked Jorge what was the reason for the apparent segregation and stratification of business and society in Brazil as I understood it. He made the very illuminating and broad-minded remark to the effect that there were "too many of us Portuguese," and that it needed American business methods and push to put Brazil where he felt she could be placed. He was deeply interested in his country, in its affairs, its people, its growth and future possibilities, as indicated from time to time in the correspondence I had with him, and was always deeply interested in the affairs of the Institute, and I remember he wrote me at length at the time of the Rand Memorial, as he was a deep admirer of Mr. Rand.

Lage had many friends at the Institute. He had a magnetic personality, was a lovable type of man and was greatly admired, respected and appreciated by all who knew him, and particularly so by those of us who were counted as his friends. It was, therefore, with deep regret that I learned of his death through your letter, for his city, his class, his country have lost an able citizen and a valued classmate.

Harold Coes wrote that he has been very busy with war work and from the list of activities which have occupied his time for the last eighteen months we agree that he must have been busy. Coes also wrote that Charley Howard had been a victim of influenza, but fortunately was on the road to recovery, and that E. P. Chase, who had been a lieutenant in the navy, was now back at his former position with the New York Public Service Commission.

The secretary regrets to report the death of another classmate, namely, Fred Charles Lebenbaum, IV, who died December 17 of influenza. Lebenbaum was born January 26, 1882, at San Francisco, Cal. He prepared for the Institute at the California School of Mechanical Arts and attended Technology two years. He went abroad, spending two years at the atelier of M. Laloux of the Ecole de Beaux Arts. He returned to America in 1909 and assisted with Samuel A. Marx in organizing the firm of Lebenbaum & Marx in Chicago in 1910. His business associate, Mr. S. A. Marx, writes as follows:

Mr. Lebenbaum possessed a rare degree of ability in designing and planning, which, coupled with a delightful personality, won for him many warm friends and admirers, in connection with his professional career.

Mr. Lebenbaum is survived by a wife and one child.

The class is indebted to our classmate, E. S. Campbell, IV, for the news of Lebenbaum's death. Campbell is a professor of Architecture at the Armour Institute of Technology at Chicago. We have recently received a very artistic booklet illustrating the work of the Architectural Department of which Campbell has been the acting head for the past three years.

Clarence Carter, I, is now resident engineer for the U. S. Housing Corporation at Project 59, Bath, Me.—J. I. Banash, VIII, has left the Underwriters' Laboratories in Chicago and is now in New York at 30 East 42d Street.—Ernest J. Ball, II,

writes that he has just been made head of the Textile Engineering Department of the Lowell Textile School.—Michael J. Ahearn, XII, has recently been elected president of Canisius College at Buffalo, N. Y.

1907

BRYANT NICHOLS, Secretary, 10 Grand View Road, Chelsea, Mass.

HAROLD S. WONSON, Assistant Secretary, 354 Congress Street, Boston, Mass.

A daily paper published in Syracuse, N. Y., under the date of January 27, 1919 states that E. W. Bonta, who is Y. M. C. A. secretary in Russia, expects to be home in June. A very interesting description of his experiences is printed elsewhere in this number of the REVIEW.

Maj. Allan R. Cullimore, Delaware College, Newark, Del.—Harry A. Fame, Box 628, Cleveland, Oklahoma.

A letter dated January 8 from T. W. Hanford states that he is chief draftsman of the machinery drafting room at the navy yard in Bremerton, Wash. He has been working extremely hard in connection with war work, and even now has plenty to do for some time to come.

Tom Gould has moved to Providence, R. I., is associated with Roy Beatty, a building contractor.—A daughter, Margaret Porter Hastings, arrived in the home of Professor and Mrs. Hudson B. Hastings, in Portland, Oregon, on February 21, 1919. This is their third child, the other two being boys.

Again in this issue of the REVIEW as in the January number, it is the sad duty of the secretary to record deaths in the families of some of our classmates.

The following item appeared in the January 9 number of the "Engineering News-Record":

Capt. Grandville Reynard Jones, Sanitary Corps, U. S. A., previously associate professor of civil engineering, Johns Hopkins University, Baltimore, died of influenza at Camp Benning, Columbus, Ga., December 22, 1918. Captain Jones was graduated from the Ohio State University in 1904 and from the Massachusetts Institute of Technology in sanitary engineering in 1907. His principal professional work was with the filtration plant, Washington, D. C. At Johns Hopkins University he designed and built the Hydraulic Laboratory and the Laboratory of Sanitary Research. He developed several courses in sanitary engineering for the senior classes in civil engineering at Johns Hopkins. Early in November of last year Professor Jones was commissioned in the Sanitary Corps, with the rank of captain, and was ordered to Camp Greenleaf, Georgia, for a brief period of training, at the end of which he was sent to Camp Benning as camp sanitary engineer.

The secretary received a brief letter on March 10 from Frank S. MacGregor, written from Miami, Florida, where he was spending several weeks of vacation. Frank is with the du Pont Powder people, at Room 4058 du Pont Building, Wilmington, Del.

William H. Martin is with the Foundation Company, 1905 Woolworth Building, New York City.

Lieut.-Col. George R. Norton's address is the Cordova, Apt. 454, Florida Avenue, and 20th Street, Washington, D. C.

Emory Chase Noyes, a graduate in Civil Engineering, died on October 23, 1918, after a month's illness of influenza and pneumonia. From the time of his graduation until December, 1907, Noyes was engaged in general engineering work with Stone

& Webster Engineering Corporation, Boston, and from that time until October, 1908, was a surveyor and draftsman with the Inspection Department of the Associated Factory Mutual Fire Insurance Companies in Boston. For a few months he was an expert aid at the United States Naval Training Station at Newport, R. I., on steam power plant work. In 1909 he entered the employ of the Ferro Concrete Construction Co. at Cincinnati, Ohio, and was with them as designing engineer, resident engineer, and superintendent until February of 1911. At that time the Trussed Concrete Steel Co. of Youngstown, Ohio, secured his services, and he was successively designer, chief engineer of the San Francisco district office, chief engineer of the Los Angeles district office, manager in charge of Los Angeles office, until April, 1918. From then until the time of his death he was assistant chief engineer of the Concrete Ship Division, Emergency Fleet Corporation, United States Shipping Board at Philadelphia.

Noyes was married in 1907 to Miss Flora E. Lane, who survives him, and who lives at 25 Faulkner Street, Malden, Mass. He was a fellow of fine integrity and ability, respected by his business associates and loved by those who knew him intimately. The sympathy of the class goes out to his widow, his parents and his brother.

Raymond Parlin has had to change his business activities on account of war readjustment and now is located at Cambridge, Mass., as a salesman of Mack Motor Trucks. Capt. Hugh G. Pastoriza, 2204 Austin Street, Houston, Texas.

The sympathy of the class goes out to "Kelly" Richards on account of the death of his wife on January 16, 1919. Karl is left with two small children.

Emerson H. Packard is finely prosperous in the coal business in Brockton, Mass. A consolidation has been affected by "Pack's" concern with another and on April 1, 1919 the Packard-Mills Coal Company began operations.

Marcellus Rambo, Course II, writes on December 21, 1918, from Avenida Rio Branco, 243 Rio De Janeiro, Brazil, S. A., as follows:

I have abandoned engineering and taken up dentistry. Have been here for five years and cannot say that I am not doing well. I was married on June 29, 1918 to Miss Bessie Crowther of Huddersfield, Yorkshire, England.

Selden E. Rockwell, is now addressed at 2332 North 62d Street, Seattle, Wash.—Bob Thayer has gone to London, England, as editor and representative there of the "Railway Age Gazette."

A letter received from Carl T. Trauerman describes in detail his various activities in mining operations of different kinds. He is managing director of the T. S. Manganese Corporation, New York, Montana Testing and Engineering Company, and the Monarch Mining and Power Company. His address is 132 E. Aluminium Street, Butte, Mont.

Maj. Arthur K. Tylee, 4 Hospital Street, Montreal, Canada.—The following is clipped from the Chattanooga, Tenn., "News" of January 3, 1919:

Chattanooga's development as the electrochemical center of the South received an impetus today which will go far towards making its pre-eminence absolutely undisputed when an application for a charter for the Southern Cottrell Precipitation Company was filed. The new company asks for a charter for a \$100,000 corporation.

Prof. Willis G. Waldo, who will devote all of his time to the enterprise, will remove to this city with his family on Sunday. He is no stranger to Chattanooga. As instructor of mathematics and applied mechanics at Vanderbilt University, in Nashville, he was persuaded by the men in charge of Tennessee River improvement, such as Senator Underwood, the late John A. Patten and C. H. Huston, to lend his brilliant engineering talents to the Muscle Shoals cause. Through the intervention of leading business men of Nashville and the South, the trustees of Vanderbilt University accorded him a leave of absence in which to compile the technical data

with respect to the utilization of the nearly 600,000 horse power now going to waste on the Tennessee River. This task occupied his entire time for upward of a year, in which period he wrote the now famous Muscle Shoals brief, which resulted in the government expenditure already of more than \$60,000,000 on the two nitrate plants near Sheffield.

Long since attracted by the "Chattanooga spirit" and the desire to enter commercial life in some line where more blades of grass could be made to grow than were growing already, Dr. Waldo had grown enthusiastic over the possibilities of the application of the Cottrell process to the industries of this section and on New Year's Day presented to his friends here the prospectus on which the new organization is based. In two hours the capital was pledged, attorneys employed to arrange for the incorporation and negotiations, based on previously acquired patent license were started with J. J. Gray, of Columbia.

The company has acquired a contract as licensees under the patents covering the so-called Cottrell process for precipitating and recovering matter suspended in gases and smoke from industrial plants, especially in chemical and metallurgical lines.

When the charter returns from Nashville, Professor Waldo will be elected president and general manager.

On account of the ending of the work of the Boston Transit Commission, P. B. Walker became associated with Fay, Spofford & Thorndike, Consulting Engineers, of Boston. He has been an engineer on the work at the Boston Army Supply Base. Barbara Walker arrived at his home on January 17, the third child.

Albert E. Wiggin, 19 Smelter Hill, Great Falls, Mont.—E. C. Wilson is captain, Co. C, 114th Engineers, A. E. F. His home address is 8 Gilman Street, Waterville, Me.

Harold Wonson, who has been a lieutenant-colonel in the army received his discharge in January and has a very responsible position with the W. H. McElwain Company, shoe manufacturers. At present he is located at their factories in Manchester, N. H.

Nathan A. Middleton, who is a major in the United States Army Engineering Corps, was commissioned captain of engineers on September 2, 1917. After spending over two months at the Training Camp, Washington, D. C., he was assigned to the General Engineering Depot at Washington, D. C., in the department of purchasing of engineer equipment. Before sailing for France he was assigned to the 23d Regiment of Engineers and appointed adjutant of the third battalion, in March, 1918. He was promoted to major of Engineers, Army, A. E. F., where he had charge of the construction and maintenance of roads, commanding about 17,000 troops. The regiment was later relieved from duty with the First Army and assigned to the reconstruction of roads and general engineering work in the forward area. Major Middleton was appointed in command of all S. O. S. troops in his district in addition to his former command, in January, 1919. His present address is 3d Battalion, 23d Engineers, A. E. F.

Lawrence R. Davis is now to be found at 2705 East Sixteenth Avenue, Denver, Col.—Lawrence C. Hampton, 1829 Altamira Place, San Diego, Cal.—Floyd A. Naramore, care of Public Schools, Seattle, Wash.—The secretary, Bryant Nichols on March 29, became the father of a fourth child, a son, Ernest Belcher Nichols, by name.

1908

RUDOLPH B. WEILER, Secretary

Care of The Sharples Separator Company, West Chester, Pa.

LESEUR T. COLLINS, Assistant Secretary

Care of Imbrie & Company, 13 Congress Street, Boston, Mass.

The regular bi-monthly dinner was held at the City Club on February 11 with Winch Heath in charge, as Tim Collins was laid up with a cold. Present: W. H. Toppan, E. I. Wells, S. F. Hatch, S. C. Lyon, B. S. Leslie, C. W. Morrison, E. J. Beede, H. A. Hale, Jr., C. W. Clark, H. S. Chandler, P. A. Esten, E. H. Newhall, M. Ames, A. W. Heath, G. M. Belcher. Bill Toppan entertained the bunch by recounting some of his experiences in the service.

E. G. Genoud, V., '08, whose death on October 12 was reported in the last issue, went to Germany after graduation in 1908 and spent three years in graduate study at the University of Berlin, receiving the degree of Doctor of Engineering in 1911. For the past three years he was connected with Arthur D. Little, Inc., Charles River Road, Cambridge. He prepared at the Boston Mechanic Arts High School and was one of the youngest members of the class, being under thirty years of age at the time of his death.

Arthur Truman Dean, I, '08, died December 14, 1918, at Bluefield, W. Va., of the influenza. He married in December, 1917. He leaves a widow, Mrs Pearl H. Dean at 23 Porter Street, Taunton, Mass. He had been with the Interstate Commerce Commission since 1914 mostly on valuation work, but was assistant field engineer for about two years prior to his death. He was a member of Ionic Lodge, A. F. and A. M. of Taunton, Mass. His death is the twenty-seventh to be recorded on the class records.

It is also our sad duty to record the death of H. H. Howland's wife on November 10, 1918, of the epidemic. Before her marriage on October 18, 1911, she was Miss Etta E. Mason, of Lowell, Mass. The sympathy of the class is extended to our bereaved classmate.

"Tim" Collins has left Marshall & Company and is now with Imbrie & Company, 13 Congress Street, Boston, Mass. F. K. Belcher has left the Pusey & Jones Shipyard at Wilmington, and is now inspector for Cramp's Shipyard at Philadelphia. E. I. Williams returned from Italy where he had been serving as captain of the Italian Commission of the Red Cross on January 21 and is now at 131 Passaic Avenue, Rutherford, N. J. Charles W. Whitmore is at the Geneva, Sea Breeze, Fla., in the process of recuperating from his nervous breakdown.

Those who attended the Alumni Banquet were L. T. Collins, A. S. Douglass, S. C. Lyon, B. S. Leslie, F. T. Towle, Matthew Porosky, W. J. McAuliffe, C. W. Morrison, P. A. Esten, E. I. Wells, E. H. Newhall, H. S. Chandler, Langdon Coffin.

NEW ADDRESSES

Lincoln Mayo, 1561 Beacon Street, Brookline, Mass.—Frank W. Wiley, 118 West 3d Street, Cincinnati, Ohio.—Charles W. Whitmore, 1963 Commonwealth Avenue, Brookline, Mass.—Aram Torossian, 30 Conant Hall, Cambridge, Mass.—Horace S. Sargent, 49 Katherine Road, Watertown, Mass.—Capt. D. B. Myers, Box 314, Pasadena, Cal.—Karl R. Kennison, U. S. S. B. Emergency Fleet Corp., 606 Lexington Building, Baltimore, Md.—Maj. Gerald T. Hanley, 349 Wayland Avenue, Providence, R. I.—Capt. Herbert T. Gerrish, 10 Haskell Street, Melrose, Mass.

—W. Fred Dolke, Jr., 611 Lees Avenue, E. Collingswood, N. J.—Leon A. Dickinson, Queen Anne Road, Teaneck, N. J.—Capt. Elliott S. Church, 8 Ardmore Terrace, West Newton, Mass.—Frank K. Belcher, 4228 West Girard Avenue, West Philadelphia, Pa.—Miss Mabel Keyes Babcock, 11 Joy Street, Boston, Mass.—Harry L. Burgess, Pacific Telephone and Telegraph Company, San Diego, Cal.—Douglas Cairns, 630 West 141st Street, New York, N. Y.—LeSeur T. Collins, 13 Congress Street, Boston, Mass.—Maj. Arthur S. Douglass, 164 Harvard Street, Brookline, Mass.—John C. Gaylord, 1025 Montrose Avenue, South Pasadena, Cal.—James E. Hale, 862 West Exchange Street, Akron, Ohio.—J. W. L. Hale, 24 Marlborough Street, Newburyport, Mass.—Philip J. Hale, 437 North 7th Street, Steubenville, Ohio.—Clarence L. Hussey, 100 High Service Avenue, Providence, R. I.—J. Allen Kane, Long Green, Md.—Lynn A. Loomis, 727 State Street, Springfield, Mass.—Maj. John Mather, care Adjutant-General U. S. A., Washington, D. C.—Maj. George A. Quinlan, 1321 East 53d Street, Chicago, Ill.—Capt. William H. Toppan, 126 High Street, Newburyport, Mass.—William E. Weinz, 24 Summit Avenue, Wakefield, Mass.—Rudolph B. Weiler, 340 North Penn Street, West Chester, Pa.—Lieut. Clifford L. Wade, Engineers Reserve Corps, Camp Humphreys, Va.—Douglas B. Turner, Sanford-Day Iron Works, Knoxville, Tenn.—Henry G. Nicholas, Mechanics Bank, Broadway and Bedford Avenue, Brooklyn, N. Y.—Lieut Ralph E. Manning, North Billerica, Mass.—Lieut. Howard B. Luther, Bureau Construction and Repairs, Navy Department, Washington, D. C.—W. H. Kiefaber, 601 East Monument Avenue, Dayton, Ohio.—Arnold W. Heath, 93 Boylston Street, Watertown, Mass.—Nelson S. Hammond, Braden Copper Company, Rancagua, Chile.—Philip J. Hale, 238 North 5th Avenue, Steubenville, Ohio.—George E. Freethy, 98 Barnard Avenue, Watertown, Mass.—Jacob A. Fottler, 262 Winter Street, Montello, Mass.—Leslie B. Ellis, care Lockwood, Greene & Company, Yorkship Village, Camden, N. J.—Clifford H. Boylston, Alabama Power Company, Gorgas, Ala.—Joseph Scott MacNutt, care C. B. Perkins, Perkins Street, Jamaica Plain, Mass.—Willard F. Rockwell, 16508 Euclid Avenue, Cleveland, Ohio.—Charles W. Bailey, North Hancock Street, Lexington, Mass.—Ernest E. Kilburn, VI., assistant general manager of Tide Water Power Company, Wilmington, N. C.

1909

CHARLES R. MAIN, Secretary, 201 Devonshire Street, Boston, Mass.

GEORGE A. HAYNES, Assistant Secretary, 530 Atlantic Avenue, Boston, Mass.

A class meeting was held at the Walker Memorial on the afternoon of March 1, prior to the alumni dinner for the purpose of making preliminary plans for the tenth year reunion of the class, which will be celebrated this June. In accordance with a vote of the class at that meeting, the president has appointed the following committee to take charge of the arrangements for the reunion: Haynes, chairman; Ayres and Maynard (the secretary to assist in his official capacity as an officer of the class).

PLAN NOW TO BE THERE!

JUNE 14-17

TENTH REUNION, CLASS OF 1909

A BIG TIME FOR A BIG CLASS

Every 1909 man should begin now to arrange to be present at the tenth reunion. Arrangements are being made by the committee in charge for an unusually good time that will linger long in the memories of all members of the class.

It is planned to secure cottages at one of Boston's south shore resorts with central dining accommodations to be in charge of a famous chef. It is expected that transportation from Boston will be arranged by automobiles contributed by members of the class.

IMPORTANT

The committee counts on the assistance of all members in making this a time never to be forgotten. One way to greatly assist is to send the first payment of \$10 to Charles R. Main, treasurer of the committee. It is necessary in perfecting the arrangements that some idea of the number to be present be made known at an early date. It is hoped that a sufficiently large attendance may be assured so that the total expense per member will not exceed \$5 per day per man. The more men we can count on will mean a lower rate, so let your application come in now and thus lend us your support in making the 1909 tenth reunion a big success worthy of the class.

1909 TENTH REUNION COMMITTEE,

GEORGE A. HAYNES, Chairman,
RICHARD S. AYRES,
CLARENCE D. MAYNARD.

The committee certainly has the right idea; we want just as many fellows for the reunion as we can possibly get out. George has promised to give us a good time and it is none too early to begin to plan to be present at the festivities. Let's all of us talk reunion from now till the fourteenth of June, and we will have the biggest "tenth" yet pulled off by any class.

At the alumni dinner the class was well represented, about twenty of the men and two of the "co-eds" being present.

Lieut.-Col. Fred M. Greene has been detailed to the instructing staff of the Institute.—Lieut. Lynn A. Loomis is back from France and expects to be out of service soon. His address will be 727 State Street, Springfield, Mass.—Capt. Henry R. Putnam, has been discharged from service and his address is now, care of Missouri Iron and Steel Company, Arcade Hotel, West Plains, Mo.—Lieut.-Col. C. H. Crawford is now with the Baldwin Locomotive Works, Philadelphia, Pa.—Col. Bradley Dewey's address is now 19 West 44th Street, New York, N. Y.—Egerton M. Bettington is now a major in the Royal Flying Corps, B. E. F.—Kenneth T. Blood has been promoted to the rank of major, and is now stationed at Fort Totten, N. Y.—Maj. C. D. Jacobs was in Boston last month and called on the secretary. "Jake" is now in the office of the chief of engineers, Washington, D. C. A short time ago his engagement to Miss Elsie T. Darby of Germantown, Pa., was announced.

It is with regret that the secretary records the death of the third member of '09 to die in service. Harold Schaffer, sapper, 6th Field Company, Canadian Royal Engineers, killed in action in France, October 29, 1918. Details of Schaffer's death have not yet been received.

Further acknowledgments of the Christmas greetings sent to the men in service have been received. Among them is a letter from Riojo Ohnuki which we print in full, as being of especial interest, coming from so far away. Ohnuki is now stationed at the Sasebo Naval Dockyard, Japan. He writes:

Many thanks for your kind letter which extending to me your cordial greetings of the Christmas. In same way I also send to you my hearty congratulation for your good health and happiness, and I beg to you as the president of the class 1909 to give my sincere wishes to our classmates in America who are directly serving to your country and allies.

For your request, I should write to you fulfill the "list."

At the war in (1914) Tingtau, China, where is one of colonies of German; I took a part as one of mechanical engineer on board of a repair ship of Japanese navy with the rank of engineer commander. In the year of 1916 to 1918, I stayed at Italy as an inspecting engineer to inspect aeroplane and submarine engines for the Japanese navy and at present I am serving in our navy as a chief engineer in designing department of Sasebo Naval Dockyard, Japan. Lately, on the 1st December of this year, I have been promoted to the rank of captain in the navy, and also was decorated by our emperor and Italian king.

Again expressing my sincere wishes to you and your all,

Yours very sincerely,

RIOJO OHNUKI

P.B. Please find a photo of my girls enclosed here.

(I wish you all could see the photograph of his charming little daughters.—C. R. M.)

Captain Perry writes from Blois, France, under date of January 18, 1919, that is "commanding an office force of about one hundred who classify, inspect, delouse and equip all men passing through this station on the way to the United States. Major Riefkohl has just arrived here as adjutant of the post, so that we have a nucleus, though a very small one, for an '09 gathering."

On the back of the "Greetings," L. C. Eddy writes to Gram:

TO THE CLASS OF 1909

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

On the U. S. S. "Missouri"

Lloyd Eddy sails the sea,

He passed the Ensign Training Course,

At Naval Academy.

Though engineering duties now

Oft call him from the deck,

He still recalls old "Oughty Nine"

And former days at Tech.

—LLOYD CHAMPLIN EDDY.

Guess we'll have to elect Eddy the poet laureate of the class.

In order that the list of men in the class in service may be available to all, and so that it may be corrected, and any missing names added, we are printing the complete "Roll of Honor" of the class. Kindly advise the secretary of any changes.

ROLL OF HONOR

CLASS OF 1909, M. I. T.

Lieut. Thomas A. Tillard, Royal Flying Corps, B. E. F., killed in France, December 6, 1916.—Capt. Ernest A. Ware, 506th Engrs., A. E. F., died of pneumonia, October 11, 1918.—Lieut. Harold Schaffer, sapper, 6th Field Co., Canadian Engrs., C. E. F., killed in action in France, October 29, 1918.

MEN IN SERVICE

Lieut. Raynor H. Allen, 308th Engrs.—Capt. Frank D. Applin, Coast Artillery Corps.—Capt. Thomas H. Atherton.—Corp. Howard P. Belknap, 151st Depot Brigade, 76th Division, A. E. F.—Maj. Egerton M. Bettington, Royal Flying Corps.—Francis H. Bishop, Co. K, 301st Inf., 76th Division, A. E. F.—1st Lieut. Thomas B. Black, 338th Field Artillery, A. E. F.—Capt. William P. Blodgett, 17th Co., Coast Artillery Corps.—Maj. Kenneth T. Blood, Coast Artillery Corps.—1st Lieut. John C. Bollendocker, 75th Aero Squadron, S. C.—Lieut.-Com. Lee S. Border, Construction Corps, Navy Dept.—Maj. Samuel Cabot, Jr., 151st Depot Brigade, 76th Division, A. E. F.—2d Lieut. Ballard Y. Burgher, Aviation S. C., 1st Training Brigade.—Field Clerk Kenneth E. Carpenter, Eng. Corps at large, A. E. F.—Lieut.-Col. Clifton C. Carter.—2d Lieut. Laurence D. Chapman, 61st Coast Artillery Corps, A. E. F.—John A. Christie.—Lieut. M. S. Clark, Co. C, 308th Inf., 77th Division, A. E. F.—Capt. William D. Clark, 5th Cav.—Lieut.-Col. Chauncy H. Crawford.—Capt. Francis C. V. Crowley, 5th Cav.—Col. Bradley Dewey, Chemical Warfare Service.—Maj. A. L. Dickerman, Jr.—Ensign Howard H. Dole.—2d Lieut. Henry W. Dun, Jr.—1st Lieut. Henry C. Drown, 101st Engrs., 26th Division, A. E. F.—2d Lieut. Lloyd C. Eddy, R. D.—1st Lieut. Herbert C. Elton.—Raymond H. Fellows, Co. F, 101st Engrs., 26th Division, A. E. F.—Ensign Frederic A. Fenger, U. S. S. "Chester."—1st Lieut. W. Craig Ferguson.—Montague Flagg, 2d., U. S. Navy.—R. C. Glancy.—1st Lieut. William S. Gordon, Jr., A. S. S. C.—Lieut.-Col. Fred M. Green.—2d Lieut. William D. Green, Mach. Gun Training Center.—1st Lieut. Arthur E. Hartwell.—Lieut. John M. Hatton.—1st Lieut. Harry L. Havens.—1st Lieut. Frederick M. Heidelberg, Insp. of Ord.—1st Lieut. Armin F. Herold.—Com. Herbert S. Howard, Constr. Corps, Navy Dept.—Maj. Carlton D. Jacobs, office of Chief of Enrgs.—Sergt. Herbert L. Jenness, Supply Co., 72d Inf.—Capt. Reginald L. Jones, Signal Corps.—Capt. Arthur C. Judd, 310th Inf.—Sergt. Robert C. Kerr.—Lieut. Walter W. King.—1st Lieut. Christian Kurtzmann, Co. D, 303d Motor Supply Train, A. E. F.—2d Lieut. Robert C. Latimer.—Maj. Paul H. Lazenby, 2d Pioneers.—2d Lieut. Hugh J. Lofting.—1st Lieut. Lynn A. Loomis, Gas Defense Service, Line of Communication, A. E. F.—Capt. Frank S. McClintock.—1st Lieut. Andrew J. Manson.—Thorndike DeV. Martin, Detachment A, 2d Bn.—2d Lieut. David P. Marvin, U. S. S. "Denver."—Capt. Riojo Ohnuki, Imperial Japanese Navy.—Lieut.-Com. J. E. Otterson, Constr. Corps, Navy Dept.—Russell H. Nichols, Avia. Sec., Signal Corps.—Capt. George T. Palmer.—Capt. F. Gardiner Perry.—Capt. Henry R. Putnam, Gen. Engr. Depot.—Lieut. Charles W. Radford.—Maj. Rudolf W. Riefkohl, 63d Artillery.—Lieut. Clark S. Robinson.—1st Lieut. A. M. Rosenblatt, 33d Engrs.—1st Lieut. Edward L. Ryerson, Jr., Signal Corps.—1st Lieut. Maurice R. Scharff.—Capt. Franz J. Schneider.—Capt. Arthur L. Shaw, Co. E, 301st Engrs.—1st Lieut. Xanthus R. Smith.—Francis H. Soderstrom, Co. B, 27th Engrs.—1st Lieut. A. H. Straus, E. Stationary Laboratory No. 1.—1st Lieut.

Stuart Thomas.—L. J. Towne.—Capt. Arthur H. Turner, 6th Marine Regt., A. E. F.—1st Lieut. Willard B. Van Inwegan, Co. C, 23d Engrs., A. E. F.—E. E. Wells.—Capt. Lyman F. Whitney.—1st Lieut. P. M. Wiswall.—Lieut. Frederick B. Wood.—Chief Yeowoman Rebecca N. Thompson, Navy Yard.

The secretary has recently received a card from A. S. Peet, who is now with the Knoxville Globe Company, Knoxville, Tenn.

John N. Boyce, since August 15, 1918, has been chief draftsman of the Experimental Department, Goodyear Tire and Rubber Company, Akron, Ohio. There are several other Tech men in the same department.

John L. Bray sails shortly for Honduras where he has accepted a position as mine superintendent. His address will be Saberia Grande, Honduras, C. A.

Homer C. Bender has been appointed as the first superintendent of public utilities of Spokane, Wash., by Mayor C. M. Fassett. His duties will include the making of personal investigations, gathering data, inspecting utility work under way, and in preparing for rate and other hearings before the Public Service Commission. Bender formerly was with Stone & Webster.

The secretary is very happy to announce the birth of Doris Woodman Main, on March 22, 1919.

1910

DUDLEY CLAPP, Secretary, care Gorton-Pew Fisheries, Gloucester, Mass.

Remember the new address—Gloucester, Mass.—and write early and often! As you know, your secretary has been in the service since the summer of 1917 and unable to perform any secretarial duties, so that all that was done in that way for 1910 was due to the efforts of my father who sent our notices, had the class blotter printed, and did what he could toward keeping up the class news in the REVIEW for a year and a half. However, now that the guerre is fini (for me, at least) and I have a position in Gloucester that doesn't call for much travelling round, you may expect a little better service from your secretary, especially if you will drop a line, even a postcard once in a while and say that you're alive.

The announcement was made of the engagement of Miss Mary Waters to J. Stuart Sneddon. Mr. Sneddon is a member of the Phi Gamma Delta fraternity. He is associated with the Babcock & Wilcox Company, Barberton, and makes his home at Anna Dean Farm.

Stillman Batcheller, III, is 1st lieutenant, Co. 6, E. O. T. C., Camp Humphreys, Virginia.

J. R. Longyear, Jr., is 2d lieutenant, Coast Artillery, O. R. C.

Mr. and Mrs. Loren N. Downs, Jr., of 626 Ember Crescent, Westfield, N. J., announce the birth of Loren N. Downs, 3d, on December 31, 1918.

The following letter from Carleton Piper is dated December, but has not before been published:

Since April 30 I have been stationed in this city as a sergeant in the Chemical Warfare Service. The government has erected a splendid plant here for the manufacture of poison gas, and until the armistice was signed, we were turning out gas shells at a very fast rate. My particular job has been that of shift chemist, which to me has been very interesting work, although it kept one hustling.

I have not met a 1910 man for several years. Most of the men here are Ohio

State graduates, and I have not as yet had the pleasure of meeting a Tech man in this locality.

I am looking forward to receiving my discharge from the United States Army within a few days now. I shall probably re-enter the employ of the George E. Keith Company of Brockton, Mass., manufacturers of the "Walk-Over Shoe" for men and women. I had been with this concern for two years prior to my enlistment in the service, and was well pleased with my work and prospects there.

In mentioning statistics might state that I am still a "bachelor," but that I am "already spoken for" by a former Dorchester young lady.

I wish to express my best regards to all my old chums in the good old class of "Mitten."

Carleton Piper is now out of the Chemical Warfare Service and is in Randolph Mass.

The following clipping from the "Transcript" is interesting:

Saul, Tom W., 1st lieutenant, Tank Corps. For extraordinary heroism in section near the Bais de Lemieres, France, September 12, 1918. Lieutenant Saul coolly exposed himself to enemy fire by standing on the parapet of a trench and directing his men in the work of getting the tanks forward. Home address, Mrs. Tom Saul, wife, 440 East 17th Street, Portland, Ore.

I met Tom Saul in St. Nazaire in December, 1917. He went over in August of that year with a railway engineering unit from the west and afterwards was transferred to the tanks.

The funeral services of the late Chester Jackson Briggs, who died of pneumonia at El Paso, Texas, were conducted by the Dalhousie Lodge of the Masonic Order at the home of his parents, Mr. and Mrs. Charles C. Briggs of Newtonville, Mass., this afternoon at 1.30.

Mr. Briggs was born in Newtonville December 20, 1884, attending the Newton schools until graduating from the Newton High School in 1903. He entered Yale College, but ill health obliged him to leave at the end of his second year. He did not return to Yale, but in 1907 entered the Massachusetts Institute of Technology, completing the four years' course in three years, graduating as a mining engineer. He immediately entered the employ of the American Smelting and Refining Company, in the department of mining metallurgy in Mexico. For the past eight years his professional experience has been devoted to the specialty of ore concentration in which he was recognized as an expert, and he was achieving a brilliant success until disturbed conditions in Mexico caused suspension of operations. He was assistant superintendent of the concentrator at the Tecolotes Mine of the American Smelting and Refining Company at Santa Barbara, Chihuahua.

For the past three years he has resided in El Paso, Texas, and has been engaged in experimental and research work in ore concentration and in mill design, for the same company. His most recent work was the design of a plant for the concentration of molybdenum ores by flotation, which was erected and is now operating at the El Paso smelting works.

In 1911 he married Miss Elizabeth Balfour of Allston, Mass., who, with a young daughter, survives him.

News of the death of Harrison L. Clough of Merrimack, N. H., has been received with no details.

The du Pont Company sent word to the TECHNOLOGY REVIEW office that David A. Stoddart, VI, died October 9, 1918.

Frank Bell, II, is now captain, A. S. A., U. S. A., Gerstner Field, Louisiana. —Herb Cleverdon, IV, is lieutenant, 104th Engineers, 29th Division, U. S. A., and at last accounts was still in France. Let's hope he's fighting the battle of Paris.

Lieut.-Col. Frank D. Applin, VI, is at Fort Ruger, Honolulu, Hawaii. We have another high ranking officer in the class—Dick Almy of the Chemical Warfare Service, who is also a lieutenant-colonel.

From various papers the following items about 1910 men have been gathered:

Capt. William F. Wills, VII, is in the Sanitary Corps, U. S. A., and is engaged in general water supply work in central France with headquarters at Tours. His address is Water Supply Laboratory, D. C. and F., A. P. O. 717, A. E. F., France.

Louis O. French, formerly a member of the firm of Morsell, Keeney & French, has severed his connection with that firm and is now associated with Richard S. C. Caldwell in the practice of patent law and soliciting of patents at 815 Majestic Building. Mr. French was formerly assistant examiner in the patent office, and has been a member of the bar of Wisconsin for some years.

Lieut. Edward S. Howe, Engineers, U. S. A., following his discharge from the army, will proceed to the Philippine Islands, where he will act as a commercial engineering representative of the Westinghouse Electric and Manufacturing Co. Lieutenant Howe was born in Kingston, Mass., and was graduated from the electrical engineering course of the Massachusetts Institute of Technology in 1910. After a period of service in the shops and Boston office of the Westinghouse Company, he spent two years at Medellin, Colombia, S. A., returning to the States early last year to enter the national service.

About a score of '10 men showed up at the alumni dinner on March 1, and had a pleasant reunion, although we couldn't all sit together. Larry Hemenway was in his ensign's uniform of Naval Aviation, which he was soon to leave off. We all agreed that it is time to get busy with the plans for the decennial reunion. It doesn't seem as if we were as old as that, but the time is coming and we must make it a worth while time.

Unfortunately, I did not get all the names of those present at the dinner, but the following are some of them: R. W. Jacoby, L. T. Hemenway, Charles E. Greene, W. J. Pead, Jr., Charles W. Wallour, G. G. Holbrook, J. B. Babcock, H. M. Schleicher, Ralph L. Beals, Carroll H. Shaw, Carl J. Sittering, Arthur H. Curtis.

1911

ORVILLE B. DENISON, Secretary, 63 Sidney Street, Cambridge A, Mass.

HERBERT FRYER, Assistant Secretary, Room 506, 10 State Street, Boston, Mass.

ADDITIONAL 1911 SERVICE MEN

MERRILL, L. M., Course V, Pvt., Gas Defence, C. W. S., U. S. A.

PEASE, R. S., Course V, Pvt., Gas Defence, C. W. S., U. S. A.

WOODWARD, E. L., Course VI, Sergt., 35th Co., Trans. Corps, 15th Division, A. E. F.

There are now, your secretary believes, one hundred and eighteen (118) stars in the 1911 Honor Roll. When the returns are all in and the final chronology of 1911's record in the Great War is in shape, that number will doubtless be larger, but one hundred and eighteen seems like an irreducible minimum.—In a recent letter from L. M. Merrill he stated his service record as follows:

Enlisted April 9, 1917, in Co. H, 1st Inf., Ohio N. G.; received warrant of corporal June 5, 1917; transferred October 17, 1917, to Co. C, 147th Inf.; transferred January 1, 1918, to Co. D, 147th Inf., transferred May 8, 1918, to Sanitary Squad A, 112th San. Train with reduction to private; transferred June 1, 1918, to 40th Co., 10th

Tr. Bn., 157th Depot Brigade to await assignment as chemist in C. W. S., transferred August 14, 1918, to Edgewood Arsenal, Edgewood, Md., working there as chemist till end of war; sent to Camp Sherman, Ohio, for discharge; discharged January 11, 1919.

R. S. Pease says he was a private in the same service (Chemical Warfare Service) in which C. R. Johnson was a major and continues to say, "Far be it from the major to ever see the private, but then, maybe he didn't know me behind my beard, which they say is a good camouflage."—The first inkling the secretary had that Edgar Woodward was in the service was a letter received from him in mid-March, in which he said in part:

Am situated at Gievres, an important railroad center in France, and hold the rank of sergeant in the 35th Co., Trans. Corps. My work at the round-house is that of machinist on locomotive repair work. We are all well and anxious to get home. Best regards to all the boys.

Another gold star is in the 1911 service flag, this one for another classmate who gave his all "over there." The following clipping from the Oshkosh, Wis., "Daily Northwestern" of January 4 tells the story:

Mr. and Mrs. Frank Metz, 260 Ceape Street, have been officially advised of the death of their son, August C. Metz, who passed away December 21, at Base Hospital No. 8 at Sarenay, France, as the result of complications following pleurisy. He underwent an operation for pleurisy November 3 and was supposed to be making a good recovery. In fact, a letter written by him December 8 stated that he was improving well and hoped soon to be sent home.

The young man was born in this city May 1, 1889, and was therefore a little less than thirty years of age. He was graduated from the Oshkosh High School in 1906, being valedictorian of the class. He then entered the Massachusetts Institute of Technology, from which he was graduated in 1911. Upon graduation he entered the employ of the American Smelting and Refining Company, as assistant engineer, and was assigned to their mining unit at Velardena, Mexico. He was superintendent of the Reforms mining unit when he resigned in June, 1918, to answer his country's draft call. He left Oshkosh in July for Camp Grant and made application for the Engineer Officers' Training School, pending which he was attached to the 36th Medical Replacement unit. He went overseas in September and was in service as a private in the base hospital when he was taken ill.

The news of the death of "Gus" Metz caused a pang of sorrow to a large number of friends in this city. He was not only a good student but a young man of unaffected simplicity and kindly hearted sympathy, and Principal A. B. O'Neil, under whom he was graduated, expressed deep regret that so brilliant a mind and so fine a character should be called from earth at so early an age. It is said of him also that not the least of those who will miss him will be the several hundred Mexican miners and their families with whom he labored unarmed but unharmed during the troublesome years of revolution and starvation. Although a mere boy, he was affectionately called "the old man" both at college and at the mines.

Besides his parents, Mr. Metz is survived by one sister, Marie, of Omaha, Neb., four brothers, William, who is with Company C, 337th battalion, tank corps, in France, and Bernard, Rudolph, and Ernest Metz, all of this city.

Your secretary has already expressed to his parents the genuine loss sustained by our class in the passing of "Gus" Metz.

Capt. "Ted" Parker, I, blew in to see the secretary in mid-March, just back from France with the 26th Engineers. He is the picture of health and said it was certainly good to be back in the Hub, where he has scarcely been at all since graduation. He is going back with the Electric Bond and Share Company, but will work from their New York office instead of returning to Utah.—From his father the secretary has learned that Lieut W. C. Davis, Jr., I, Co. A, 305th Engrs, 80th Division,

A. E. F., was severely wounded in action November 1, 1919, in the Argonne-Meuse offensive. Hope he's fit again by now!—1911-ers may well be proud of the showing of her members in the Gas Defense, C. W. S., for among the eight Tech men who became majors, four of them—exactly 50 per cent—were 1911-ers, viz., Maj. C. R. Johnson, in charge of the Technical Section; Maj. I. W. Wilson, in charge of carbon manufacture at the Astoria plant; Maj. J. C. Woodruff, in charge of the Chemical Manufacturing Development Section, and Maj. T. L. Wheeler, in charge of the chemical development work at Astoria. Other '11-ers to obtain commissions were Capt. W. H. Coburn and 1st Lieut. Joseph C. Fuller. Fine work, boys!—1911 visitors at the Tech Bureau in Paris since the signing of the armistice have included: W. C. Davis, Jr., D. C. Barton, Edward Kenway, J. L. McAllen, T. S. Killion, M. C. Kinney, C. P. Kerr, Louis Grandgent, W. D. Foster and J. O. Greenan. The last-named in a letter written February 25 says that "the Bureau does more to make us feel at home here than any other one thing, and that is largely due to the personality of Gibbs—the ideal man for the job." Greenan at that writing had just finished a month's work on the mine section of the Peace Commission and hopes to be home soon.—Sergt. Oliver D. Powell, Battery F, 309th Field Artillery, A. E. F., wrote a splendid, breezy letter on New Year's Day and lack of space alone prevents its appearance in full, and the same applies to a corking, characteristic letter written three days later by Lieut. Carl G. Richmond, Co. A, 605th Engrs., A. E. F. Powell said in part:

I was with my battery as instrument sergeant through the St. Mihiel drive but left them to attend the O. T. C. at Saumur Artillery School toward the end of September. In May I turned down an opportunity to attend an O. T. S. in the States, preferring to come to France quickly. In August I preferred seeing action at the front to going to school. So, although thereby I lost the chance to get a commission before the armistice was signed, I waited until after I had been in battle before I went after the bars.

We who successfully completed the school December 21 hope eventually to receive our commissions. "Zeke" William (an ex-'11-er) was a loser by the same ruling. "Dick" Ranger was a captain at the school and in charge of the course in military signalling. Both Zeke and myself were specializing in G. P. F's and would have probably gone into heavy artillery if the war had continued.

That's good spirit, the secretary'll say!—Carl Richmond said in part:

Good stuff, that blotter dope! At that portentous moment—the 11th, 11th-11th, this 11-er was in Chalindrey, Haute Marne, France, expecting to go into the front lines just four days later. Just now I am at the headquarters of the 8th Corps, First Army, and as our captain is away I am C. O. of Co. A, 605th Engineers. Our immediate work consists of erecting some barracks and stables for the corps troops.

Our work in the army has been a lot of fun in a way, and although it has cost me a bit one way and another with the decrease in salary and all that, still if I had it all to do over again, I would be in even sooner than I was.

About November 5 or 6 I met Maj. C. R. Johnson, '11, of the C. W. S. in Chaumont at the A. E. F. Gas School. He had just come across and was looking up some pointers on gas-mask manufacture. Think he is the only 1911 man I have met over here. I used to be in the same outfit with Jack McAllen, '11, but I have not seen anything of him since June although I know he is only a short distance from here towards Germany.

Lieut. "Jack" McAllen, III, is with the Army of Occupation and wrote under date of February 4:

Am stationed now at Kirsch on the Moselle River about ten kilometers below Frier, in charge of a detachment of fifty men, eight trucks and eighteen truck drivers. We run the town and none may stir without the permission of his mightiness—myself. Be that as it may my responsibilities rest lightly on my shoulders.

I've had a leave of absence during which I visited Paris, Bordeaux, Cette, Marseilles, Nice, Monte Carlo, Lyon, Dijon, Nancy, Metz, Luxemburg and a lot of small towns. Altogether a very salubrious time.

Remember me to any of the 1911 men you run across. I'll try to get up to see you all before I go back to Alaska.

Another '11-er in Germany is Lieut. T. S. Killion, who in February was in Neuwied with the 2d Division. In his characteristic breezy style he writes:

A long lost REVIEW for November rolled in here today and it was good reading. Also a note from you ist gekommen about dues. I send you my dues, for "spend your money and sleep in the streets" is the idea. However we are not sleeping in the streets by a long shot these "ruff" days. Mister Deutscher comes across with the "Besser oder am besten zimmers" that he has and we crawl in, bag and baggage.

Things are so so. The game is over and I can see where this "Peace War" is going to be hell. Hence we are looking for the day when we get some trip to another area—say four thousand miles west of here. Here's to the day when we walk up Boylston Street or down Tremont.

M. R. Thompson, XIV, has been discharged and is now doing metallurgical engineering work in the largest copper refinery in the world—the Baltimore Copper Smelting and Rolling Company's plant in Baltimore.—Robert E. Anderson, III, is also discharged from service and is back at his old stand in Cincinnati. He was a second lieutenant in Field Artillery at Camp Zachary Taylor.—Welcome indeed was a recent letter received by the secretary from Ove Collett, III, who is an engineer under his own "shingle" in Kristiania, Norway. The note was a mere formality, with class dues enclosed, but the secretary was glad to hear from our Norwegian classmate.—Franklin Osborn has accepted a position with the Eustis Mining Company, Eustis, Quebec.—"Boz" Bogdasarian is still with Carnegie Steel Company in Newcastle, Pa., and says the plant had so much war work that he was shifted from Class I to Class II in the draft.—Here is an interesting letter just received by the secretary from Mayo Tolman, '13, who is linked with 1911 through his marriage to Miss Ruth Dunbar, '11. Tolman said:

You may recall Ruth Dunbar of the class of 1911. We were married in January, 1914, and in April, 1915, our first boy was born. March, 1917, a second youngster arrived. This little fellow, who bore promise of being a very bright and likable youth, was drowned in the Kanawha River January 10. His older brother felt the loss so keenly that Mrs. Tolman decided to go north to her home in Brookline in order to take the youngster away from the scenes that reminded him so much of his brother. Ruth is now studying pathology and advanced bacteriology at the Brooks Hospital and the Massachusetts State Department of Health. Her idea is largely to be of service to the new firm of Pierce & Tolman, Incorporated. James B. Pierce, Jr. of your class, who has long been here in Charleston as chief chemist of the Rollin Chemical Company, and I incorporated last Saturday as a firm of chemical and sanitary engineers. In a few days I will send you one of our letterheads and a prospectus showing the type of work we plan to undertake.

J. B. is blossoming out into a promising golf champion. Yesterday we played thirty-six holes and I am sure he didn't lose more than a dozen balls and he didn't happen to catch anybody in the back of the neck on a wild drive. Let's hope Pierce & Tolman don't catch it in the neck either.

At last your secretary has learned where J. B. Pierce is!—Here's an announcement joyfully received by friend secretary:

Mr. and Mrs. Donald N. Frazier announce the birth of a daughter Elinor Martha, born the seventh day of March, 1919.

Arthur W. Carney, III, died at Tampa, Florida, October 24, 1918. Word was received from Edward M. Carney, February 24, 1919.

Here's what the "Boston Herald" said on February 21 about "Gutzie" Barker:

With the opening yesterday at 18 Tremont Street of a professional and special section by the United States employment service, business men throughout New England are afforded an opportunity to obtain highly educated and experienced men and women, especially equipped to meet their particular needs, free of charge.

Charles M. Barker, a graduate of the Massachusetts Institute of Technology, heads the section, co-operating with Everett W. Lord, the federal director. The Boston office, in addition to caring for this city and state, is also in charge of placing applicants in Maine, New Hampshire, Vermont and Rhode Island who cannot be immediately placed in their home states.

Seems natural to have him back in Boston.—Here's another 1911 business venture, this time by Roy MacPherson, II, a "townie" of the secretary's. This clipping is from the Framingham "Evening News," of March 22:

Framingham is to have another first-class garage and automobile salesroom and good judges who have seen the plans say it will have no superior, if any equal, between Boston and New York. A corporation has been organized under Massachusetts laws for the conduct of the business. Ex-Senator James E. MacPherson has acquired the property and Roy G. MacPherson and P. B. Chatterton are the controlling factors in this new enterprise.

Roy G. MacPherson graduated from the Framingham High School and received his degree of bachelor of science from the Massachusetts Institute of Technology in the mechanical engineering course, eight years ago. Since then he has had a wide experience as efficiency engineer and consulting engineer for various large manufacturing concerns, much of his time having been spent upon internal combustion engines.

The team looks to be a strong combination and they have entered upon the project only after the assurances of a large circle of prospective patrons. They say their watchword will be "Service."

The corporate seal and articles of incorporation show the real estate holding company to be named the Framingham Garage, Inc., while the name of the operating company is the Framingham Motors Company.

Building operations will commence in a few days and the new building will be pushed to completion with all possible speed, to accommodate the business already in hand.

There were twenty-nine 1911-ers at the annual dinner of the Alumni Association at the Walker Memorial on March 1, as follows: Barker, Buckley, Clark, Coupal, Cumings, Curtis, Denison, Dolliver, Dyer, Estes, Fryer, Haines, Hall, Jenks, Lake, Leary, McManus, McNeil, Osborn, Pead, Romer, Shohan, W. J. Simonds, Van Tassel, Wade, P. V. Wells, Wilkes, F. A. Wood and R. O. Wood. The boys reminisced diligently throughout the dinner, the secretary missing this opportunity on account of being busy with the musical end of the program.—When you come back from France, if you hit the Hub, just call up Dennie at Cambridge 6700 or Belmont 1028-W, won't you please? Also, wherever you are, "W. T. D." Thank you!

CHANGES OF ADDRESS

R. Y. Althouse, 4257 N. Lockwood Avenue, Chicago, Ill.—Lieut. Robert E. Anderson, 307 Broadway, Cincinnati, Ohio.—H. E. Babbitt, 204th Engrs. Hall, Urbana, Ill.—Lieut. Olin V. Chamberlin, 603 North Main Street, Washington, Pa.—Ove Collett, Munkedamsvei 27, Kristiania, Norway.—Mitchell Coffin, Niagara Falls, N. Y.—Marshall E. Comstock, 9 Brooks Street, West Medford, Mass.—Albert L. deRomaña, 117 Brandywine Avenue, Schenectady, N. Y.—J. H. Dunlap, 17 Rhodes Avenue, Akron, Ohio.—Rudolph Emmel, 6 Olenside Avenue,

Jamaica Plain, Mass.—George H. Estes, 196 Bates Street, Lewiston, Me.—Thomas H. Haines, 39 Elder Street, Dorchester, Mass.—Capt. John A. Herlihy, 11 Kowin Street, Dorchester, Mass.—Bancroft Hill, 13 East Read Street, Baltimore, Md.—H. P. Ireland, 60 Rolatary Avenue, Binghamton, N. Y.—Harold G. Jenks, 389 Essex Street, Salem, Mass.—Lieut. T. S. Killion, Headquarters, 2d Division, A. P. O. 710, A. E. F.—C. A. Magoon, Riverdale, Md.—L. M. Merrill, Glendale, Ohio.—Capt. T. B. Parker, 71 Broadway, care Electric Bond and Share Company, New York City.—Ralph S. Pease, 297 Grove Street, Fall River, Mass.—J. B. Pierce, care Pierce & Tolman, Inc., Charleston, W. Va.—Sergt. Irving R. Pray, Central Tinguaro, Perico, Cuba.—John H. Scoville, 3 Cottage Street, South Orange, N. J.—F. G. Smith, 108 Field Street, Torrington, Conn.—W. W. Warner, Box 157, Nowata, Okla.—W. C. West, 14 East Jackson Boulevard, Chicago, Ill.—Ensign Robert O. Wood, 11 Lowell Road, Concord, Mass.

 1912

RANDALL CREMER, Secretary, 7 The Circle, Rochelle Park, New Rochelle, N. Y.

Theodore R. Prouty, IV, died in France at General Headquarters, on September 24, 1918, word was received from the War Service Auxiliary January 29, 1919. The Boston "Transcript" of March 1, 1919, prints the following:

Mr. and Mrs. J. S. Starr of 15 Orange Street, Waltham, have just received a cable message informing them of the accidental death of their son, Frank E. Starr, a mining engineer in Chuquicamata, Chile. Mr. Starr was twenty-seven years old and was a graduate of the Fitchburg High School and the Massachusetts Institute of Technology, class of 1912. Besides his parents Mr. Starr leaves a wife and an infant child, a sister, Mrs. R. S. Dolber, and two brothers, Herbert W. Starr and Harry A. Starr, the latter in the United States Army of Occupation in Germany.

G. S. Witmerin, Chuquicamata, Chile, writes under date of February 27:

I regret to have to inform you of the death of Frank Starr, yesterday morning as the result of an accident. He is survived by a widow and small child.

As far as I have been able to learn he was thrown from his horse in front of an approaching ore train, falling between the rails. The brake beam of the first car struck him on the head as the train was brought to a stop. Death was, I believe, instantaneous.

George B. Brigham, IV, is instructor in drawing and descriptive geometry at Tufts College. His home address is 57 School Street, Dedham, Mass.

Richard P. Wallis, I, has been engaged in engineering work in Albany, Cleveland, Minneapolis and in the United States War Department, Construction Division.

 1913

F. D. MURDOCK, Secretary, 483 Crescent Avenue, Buffalo, N. Y.

ARTHUR W. KENNEY, Assistant Secretary,
3511 Lowell Street, N. W., Washington, D. C.

From our most pleasing correspondent, Mayo Tolman, we learn of the achievements of Geoffrey Thayer. In speaking of him Tolman says:

I never have heard such nice things said of any one as people say about him. I know a lot of the Norfolk & Western officials and they state they lost one of their most promising men. Everybody in Bluefield feels that they have lost one of their most promising citizens.

Mayo was appointed chief engineer of the Syrian Relief Commission doing work in Syria, Turkey, Armenia and Persia and southern Siberia. Death by drowning of his youngest boy was the reason for his giving it up. We are pleased to print one of his recent letters.

You will be sorry to learn, I know, that on the 10th of January Ruth and I lost our youngest boy by drowning. The little fellow with his older brother wandered over to the river to watch the steamers go by. The littler fellow got into a boat that was moored at a dock. When he came to get out the boat pushed away and let him into the water. His older brother, who is but slightly over three and one-half years old, waded into the ice cold water up to his neck to get the little fellow. A colored man who heard him crying came down and pulled him out but absolutely lost his head and left the little fellow in the water still struggling, though he was not out beyond the waist of the colored man in depth. The colored man brought the older boy home and when Ruth asked him where the little fellow was he said, "In the river drowned." Ruth rushed over and found him face down caught in some bushes. She worked on him for more than three and one-half hours but to no avail. His loss has been a very great blow to both of us because he was as sweet a child as I ever expect to see. We have, however, one very great consolation due to a splendid act of our truly wonderful governor.

Last fall I secured a Baltimore & Ohio Railroad passenger coach and fitted it out as a traveling health exhibit. In one end is a small laboratory for general diagnostic work, bacteriological and chemical examinations, together with a gasoline engine and dynamo to furnish power to run a motion picture machine and operate many of the models which are mechanical. The Board of Public Works absolutely refused to allow a cent for the operation of the car, this despite the most urgent appeals on the part of the governor, the health commissioner and myself. The result was the very morning the little fellow was drowned we had advised our man in charge of the car to look for a new job that the car would be abandoned in a comparatively few days. However, the moment the governor heard of Martin's death he called a meeting of the Board of Public Works and told them that I had spent three and one-half years in West Virginia and had saved many lives through my work but that now I had lost a life more dear to me than any. He went on to tell them that this health car was one of my pet projects and that he wanted them to appropriate funds to operate it as a memorial to Martin. He further told them that just so fast as they adjourned he would call them together again until the necessary funds were made available. As a result nearly thirty thousand dollars have been appropriated for the use of the car. Both Ruth and I feel that his death probably has been a great blessing to the people of this State, though it certainly has been a hard blow to us.

The Technology Club of West Virginia has had some very live meetings. A couple of weeks ago I gave them a talk on the Red Cross in Guatemala, illustrated by lantern slides and motion pictures. Many of the members brought their wives and sweethearts—among the latter was R. D. Bates of our class. He has been working at Nitro and lost his heart while there. I suppose it is only a question of a very brief time before he too joins the benedicts.

Mrs. Tolman is in Boston at the present time studying pathology. It is my plan to cut loose within a brief year or so and go into consulting sanitary engineering work. She is going to handle bacteriological and pathological work for the doctors. Must close now with best wishes to you and all my other classmates.

P.S. You might be interested to know that I recently was offered the position of chief engineer of the Syrian Relief Commission doing work in Syria, Turkey, Armenia and Persia. I refused on account of Martin's death.

Since receiving the above letter we have heard that Tolman and James B. Pierce Jr., class of 1911, have incorporated and opened an office as consulting chemical and sanitary engineers. The prospects for the concern are very bright and we surely wish the boys all success.

Back in January bashful Ralph Rankin, VI, confessed to the secretary that he had been married on November 30 to Miss Constance Flood. It is the secretary's pleasure to know the estimable young lady and Ralph is to be congratulated. The couple have our best wishes for happiness. Ralph has been released from the navy and is back at work for the American Telephone Company in New York chasing phantom circuits. For the benefit of electrical ignoramuses, we will say that this is very high grade electrical detective work.

The class boasts one major, George Richter, who by the way is back in New Hampshire and out of the service, and we would have had one more officer of that rank if the armistice had been signed a little later. Read Bill Kay's letter of February 23.

I have not written you in so long, that I fear the fellows of '13 may have almost forgotten me, and I have sufficient love for the class not to wish that. I never miss a number of the class news, and it is most interesting to note the fellows who are getting ahead. We were not such bad guessers anyway.

As you may remember, I left the Brooklyn Edison Company about three years after graduation, giving up the position of Power Engineer to go into the banking business with S. W. Straus & Co. of New York. At the time of our entry into the war I was manager of the Loan Department of that concern, and on September 5, 1917 accepted a first lieutenantcy in the Gas Defense Division. I use the word "accepted" as that seems to be the proper army term. In July, 1918, the Gas Defense Division was taken over into the Chemical Warfare Service, with Colonel Walker head of the Offense, and Col. Bradley Dewey, (son of Professor Dewey) head of the Defense. We then moved our headquarters to New York, where I was made a captain and designated Officer in Charge Contract Department. On November 11 we had the pleasure of cancelling between \$95,000,000 and \$100,000,000 worth of contracts, and the work of adjusting these, was taken over by a new department, the contract adjustment section of which I was made chief.

Associated with me in this work are Ken Blake and "Birdie" Duff, and two better fellows and finer engineers never existed. Ken is just being discharged from the service.

Am enclosing you a copy of a letter from Major-General Sibert, of which I am duly proud and which I believe entitles me to full membership in a class as progressive as '13!

The letter referred to gave the information that Bill would have had his major's commission if the armistice had not occurred so early.

We wish to offer our apologies to Gordon Howie, I, for delaying printing the notice of his wedding to Ethel M. Patten at Melrose Highlands, Mass., on December 21, 1918. Please accept our belated good wishes, Gordon.

It seems too hot in this climate for Horace Lawrence, for he has already left again for Latouche, Alaska. Horace was drafted, came and did his duty and now like a faithful husband and citizen is back on the job.

W. S. Black, another miner, is out of the service and temporarily in Virginia on some sort of mining work.

Ed. C. Gere, I. is apparently chosen to be a soldier for life. He is with the regular army and now stationed at Manila, P. I., with the 9th Cavalry.

Professor Sedgewick received a post card from George Bakeman, XI, dated December 6 at Irkutsk, Siberia, giving a photograph of a trainload of American hospital supplies on the way to western Siberia from Vladivostock. A real American Red Cross train, in charge of Americans, and guarded by American "Sammies." Mr. Bakeman adds:

I travelled on this train as far as Irkutsk, where I shall be located for the winter. Irkutsk, the finest city in Siberia and is truly Russian. Best Christmas and New Year's wishes.

Albert W. Buck, VII, has left Serbia and is now attached to the American Embassy in Paris.—William A. Bryant, I, was able last December to finish his duties with the engineering staff of the United States Housing Corporation and hurried back to Boston where he realized one of the dreams of his young life,—to be married, to Miss Etta M. Fowler.—Perry Burleigh is representing the National Fire Insurance Company of Hartford, in the State of New Jersey, looking after sprinkler risks.

We have notice of the change of address of D. E. Lewis, '13, to 5th and Fir Streets, San Diego, Cal. Some one will surely want to know what Dan is doing out there and when he reads this he will please write the secretary something about himself. When one goes that far out of his way, he ought to explain himself.

It is with genuine grief that we must print notices of the death of five classmates. Not to complain, we merely remark that the class is pretty young to suffer so severely at the hands of the Grim Reaper.

On October 3, 1918, George R. Burns, I, died. His death was followed on the 21st of the same month, by that of Henry E. Randall, Jr. On March 4 of this year we lost John K. Batchelder and John H. Wilfert, II. On December 23, 1918, Ruben Arey, lieutenant, junior grade of the United States Naval Reserve Force, was lost at sea between Portugal and the Azores.

Sidney Powers' war record is as follows: September 26, 1917, commissioned second lieutenant, June 11, 1918, active service. October 26, 1918–February 21, 1919, Geologic officer. G. H. Q., A. E. F., February 23, 1919, discharged.

John V. MacDonough, X, is second lieutenant Field Artillery, Camp Taylor. Permanent address: 67 Franklin Street, Watertown, Mass.

At the alumni dinner we were very well represented. Twenty-four men were counted at our tables. They were: Thompson, Brewster, Muther, Capen, Bryant, Gage, Eichorn, Glidden, Murdock, Merrill, Strachan, Morton, Gustin, Christie, Parsons, McLellan, Cushing, Hersom, Cairns, Hoyt, Clark, Brown, Clancy and Wells.

Charlie Thompson is with the Hood Rubber Company at Watertown. Bill Brewster is assistant superintendent of the Plymouth Cordage Company. (Walt) Muther is just back from France where he has been a pilot in the Aviation Service. Capan has just been released from the service and is associated in business with his father. Eichorn, Strachan and Hersom were in naval officers' uniforms.

It was a jolly crowd and surely time has made little impression upon the youth and spirits of these men.

1914

C. J. CALLAHAN, Secretary, 506 Delaware Avenue, Buffalo, N. Y.

ELMER E. DAWSON, JR., Assistant Secretary,
28 Washington Avenue, Winthrop, Mass.

No report received from the secretary.

Fred E. Sauer, Jr., I, passed away January 30, 1919, death being due to influenza and double pneumonia. He was assistant engineer with Metcalf & Eddy, 14 Beacon Street, Boston, Mass. Word was received from his wife, whose address is 92 Trenton Street, Melrose, Mass.

Word has been received at the REVIEW office of the death at sea on January 15, 1919, of Benjamin Silverman.

1915

WILLIAM B. SPENCER, Secretary, 527 North Grove Street, East Orange, N. J.

FRANCIS P. SCULLY, Assistant Secretary, 5 Exeter Park, Cambridge, Mass.

ON THE PART OF THE SECRETARY.

The secretary finds it quite difficult to get news from the 1915 men; probably because of the large number who are changing from the military life back to civil life, or who are involved in the vast readjustments taking place all over the country. We hope that we shall receive a large quantity of interesting news before another writing.

We were favored by a personal visit from Everett Brigham recently in New York. Brigham has charge of the Boston office of the Weiss Steel Products Company. He has been establishing new agencies throughout the east and southeast. He had met "Jack" Dalton in Philadelphia and had found him well, happy, and quite prosperous.

Among the 1915 fellows overseas we understand that "Parm" Sabin has risen to the rank of major, and has been in France most of 1918.

Arthur W. Mudge, Jr., is a captain, 22d U. S. Inf. His permanent address is 7 Wedgemere Avenue, Winchester, Mass.—Donald A. Fowle is with the headquarters of the 101st Engineers as sergeant. He has been across since September, 1917.

James A. Tobey, 1st lieutenant in the sanitary division of the United States army has been transferred to Camp Surgeon at Wilbur Wright Field, Fairfield, Ohio, after having finished the anti-malarial work at Charleston, S. C. In that place he built about sixty miles of drainage ditches, and converted a malarial district into a healthful locality.

Your secretary is located with the White Fireproof Construction Company, New York City. He welcomes a visit from any classmate or Tech men at all times. The address of the company is in the New York telephone directory.

ON THE PART OF THE ASSISTANT SECRETARY.

Owing to my presence in the navy since October, 1917, I fear that I have rather neglected my duties as assistant secretary of the class of 1915. However, as my request for inactive duty has now been approved and I expect to return to Boston in a very short time, I hope that I shall be able to resume my active interests in the class affairs and that from now on the class news will be more extensive.

Bill McEwen, course II, ensign in the Naval Aviation Corps, was transferred from Technology to Seattle upon the establishment of the ground school in that city. According to Bud Thomas, course II, who dropped in to see me here at Washington about a month ago, the Tech men get along pretty well out in that part of the country. Bud is by this time on inactive duty and probably at home in Springfield, Ohio. Sid Clark, course II, 2d lieutenant, United States Marine Corps, and who was one of the very first men who enlisted in Naval Aviation, is now back after having spent considerable time on the western front flying with the Marine Corps. I have met Elbridge Casselman, course X, quite a few times here in Washington. He has been very active in the Tech Club in this city and is now the secretary and treasurer. Allen Abrams, course V, known to fame as the manager of the Glee Club on one of its famous trips, is one of the Tech bunch that used to gather in Washington during the last six months. He was a 1st lieutenant in the Gas Defense Corps but has now returned to civil life.

Maurice Brandt, lieutenant (j. g.) was stationed at the Bureau of Ordnance

The number of Tech men who were in Washington was very large but 1915 supplied comparatively few.

Lester Morse, I, 2d lieutenant United States Army Aviation, after serving as instructor was assigned to Massachusetts Institute of Technology to take special course in aeronautics given only to a few pilots who were thought might be particularly useful on the engineering end of the flying game. I saw him about Christmas and he was then living at the Tech Chambers, just about the same as back in the old days.

Harking back to our freshman days the drop kick that won the game for 1915 was made by Johnnie O'Brien. I have not received any direct word, but rumor has it that he has been working for the United States Navy at the airplane plant of the Burgess Company, in a civilian capacity. The captain of our track team that day was Hann, his first name has slipped my memory, who unfortunately only stayed in Tech his freshman year. He is hale and hearty, and located in New York.

Mr. Joseph W. Barnwell wrote the following letter about his son, Joseph, Jr.:

Joseph was employed a few days after his graduation by the du Pont Company in engineering work at Hopewell near Petersburg and subsequently after the work there was completed by the same company he was employed at Parlin, N. J. Desiring to obtain engineering work and not operative work which he was doing at Parlin, he accepted the position of 2d lieutenant in the Johnson Engineers, a part of the National Guard and served for nine months on the Texas border. Returning he was elected as assistant engineer to the State Highway Commissioner and upon the formation of the 117th Engineers of the National Guard was made junior 1st lieutenant of Co. A, and went with them as a part of the 42d (Rainbow) Division.

He was promoted to be senior 1st lieutenant and captain of Co. A, and is now in Germany with the Third Army. I have a letter from the colonel of his regiment saying that his company is the best disciplined in the regiment.

Mr. Barnwell also states that Barnwell and a detachment from his regiment were given a citation for efficient service on a raid in March last, in which they penetrated to the third line of the enemy's trenches.

1916

LIEUT. (j. g.) JAMES M. EVANS, U. S. N. R. F., Secretary

573 East 28th Street, Paterson, N. J.

ENSIGN RUSSELL H. WHITE, U. S. N. R. F., Alumni Council Representative

Commonwealth Avenue, Boston, Mass.

DONALD B. WEBSTER, Assistant Secretary

18 Clarendon Street, Malden, Mass.

On March 1 the alumni had their annual banquet in Walker Memorial, and through the efforts of some twenty-six sixteeners the class had a good representation. Those who were present were: D. L. Comiskey, Ensign R. H. White, P. C. Webber, Ensign L. R. Byrne, H. A. Moxor, Lieut. H. C. Fuller, H. G. Morse, C. P. O. A. C. Giles, M. M., Alexander Breth, Gordon M. Fair, Lieut. (j. g.) James M. Evans, Capt. Frank B. Hastie, Stewart Keith, S. R. Berkowitz, Earl A. Edwards, P. N. Brooks, W. H. Blank, T. S. Curtis, Walter S. Aiken, Mark Aronson, H. E. Proctor, John G. Fairfield, F. S. Hunt, O. C. Morris, Jack McDevitt, Lieut. Walter V. Reed.

A short class meeting was held and all were notified of the class letter that is about to be mailed. It was urged by the secretaries to have those present spread the news regarding this letter, so that the hearty co-operation of all the men can be expected.

At the banquet Rusty White acted as chief, and he started off the evening with a regular "M. I. T." plus three 1916's on the end. During the evening the following telegram was received from Lieut. "Irv." MacDaniels who is on duty as a naval constructor at the Navy Yard, Mare Island, Cal:

With my deepest regret that I cannot be present I wish '16 to join me in a silent toast to our members who paid the supreme sacrifice and joined the class eternal: Ignats Ingraham, Ted Wyman, Jimmy Uhlinger, Bill Sprague, Phil Morrison. Technically yours, IRVING B. MACDANIEL, Lieut. C. C., U. S. N.

Leonard Stone's father wrote the following letter in answer to the class notice regarding the banquet:

With the object of correcting your records, please note that my son, Leonard Stone, '16, has received his captain's commission in the Marine Corps. He would doubtless attend the Alumni Association Banquet if he were in this vicinity but his company is now stationed at Grievies, France.

After the banquet some of the boys adjourned to the Lenox and old "Highball" John helped us to round out an evening voted by all a great success.

This account of the deeds of Bill Sprague was published in the "Tech," from H. T. Mayo, Admiral, U. S. N., Commander-in-Chief, Atlantic Fleet:

I happened to be at the United States Aviation Station in Ile Tudy, France, on the day when the unfortunate accident occurred which cost you a dear son and the United States an accomplished aviator officer. I had had the pleasure of meeting Ensign Sprague only a couple of hours prior to the accident. It is hard to express one's feelings of sympathy in a case like this! Words seem very feeble! But I do assure you that you have the full sympathy of the United States navy in your loss. It should be a consolation to you that your son gave his life for his country—that he was doing his duty, doing all that a man could—and that he was at all times ready for that supreme sacrifice which came to him.

The navy, and the country, are proud of him and of the American manhood which he represented.

(TRANSLATED FROM THE FRENCH)

3e Arrondissement M-Me, Port De Lorient, Lorient, 29 October, 1918.

Le-Vice Admiral Commanding-in-Chief cites to the order of the day
(War Cross with gilt star)

Ensign Sprague, U. S. N., on the 26th of October, attacked and probably destroyed an enemy submarine which had been sighted by him near an important convoy which he thus efficiently protected.

Killed gloriously when coming back from this brilliant action, in a landing accident.

Commanding-in-Chief, Maritime Prefect, The VICE-ADMIRAL AUBRY.
P. C. C. Le Capitaine de Corvette Vascalde, C. P. A. L.

The death of E. A. Ingham was reported as follows in the Boston "Transcript," January 4, 1919:

Edward A. Ingham, district health officer of the California Board of Health, a graduate of the Massachusetts Institute of Technology, '16, and a former member of the Massachusetts Institute of Technology faculty, has died in California. His death was from influenza, contracted while combating the epidemic in California. He was a native of Topeka, Kan. As a member of the Technology faculty, he was first assistant in the department of biology and assistant in the sanitary research laboratory, and later, until 1917, instructor in these departments. He conducted for Technology an investigation of rural health conditions in Massachusetts, and managed the first public school for health officers established by the Public Health Committee of the Massachusetts Medical Society.

Lieut. Harold H. Burkhardt reports the following, in a letter to Mr. Gibbs, dated January 22, 1918:

Please pardon the long delay in answering your very kind letter of August 31, enclosing the addresses of Dave Card and Bill Short. I have been very neglectful of my correspondence for quite some time, but it has not altogether been my fault.

You, of course, know how swiftly events have been marching in the A. E. F. recently, and up to the cessation of hostilities. Well, my career has been almost as swift . . . and infinitely more varied. Since I last saw you at Paris I have had a multitude of changing experiences. Not all of them were pleasant by any means, but I am mighty glad to have had them.

When I came back from the French army (and by the way I was with them at the time the Boches made their last attack on July 15) to rejoin my regiment, I found my regiment on the way to their sector in the Vosges. All but two batteries had already left. While we were there we took Frappelle in a little operation which the newspapers (with their usual foolishness) hailed with acclaim. It really amounted to nothing. I happened to be liaison officer with the Infantry. I saw all there was to see.

From there we went to the St. Mihiel sector for the operation there in which we were so successful. The hike up there took seventeen days and I shall never forget it. It was a case of hike all night and work all day, and when you could get any sleep you slept in beautiful, soft, wet mud. Not at all pleasant. Our horses died on the way—it was awful. But we got there, and as soon as we arrived there I was chosen the liaison officer with the attacking battalion of Infantry. I was glad at the time but I didn't know what I had in store for me. I had some experience. For four days I was with the Infantry, two days and nights I lived in shell holes, under almost continual shell and machine gun fire. The first food I received in a day and a half was bread and cheese I took from German prisoners. I certainly saw what war really is.

Shortly after I had returned to my regiment again I received orders to report to the chief of artillery of the Fourth Corps. I was put in charge of the artillery information advance center at Mamay. I had a fine job there, the most interesting work one could wish for. I had a telephone central and was connected up with all the sound and flash ranging stations, balloons, etc. As soon as the Boche battery was located it was my job to telephone it to the artillery concerned and get some fire put on it. Can you imagine how interesting it was? And then, a short while after I was taken here in the S. O. S. for a staff job when General Lassiter was made the chief of artillery of this army. The work was highly interesting in spite of its being so far from the lines. The best of it is that I have had the opportunity to see the war from so many different angles. It has been great. But I am sincerely grateful that it is now over. I have seen too many good men go west. It is too bad.

I see that I have written a whole volume. I did not mean to write but a short note when I started out. I must close now, however.

I thank you for your kindnesses when I was with you in Paris, and for the address you sent me. Owing to the unsettled condition of the army I don't think I had better write to Bill Short as he is probably no longer in Paris. By the way, from all accounts you must have had quite a celebration in Paris when the armistice was signed. How about it?

I hope I may get the opportunity to drop in on you some time again, till then "au revoir"—best wishes and regards to all.

"Buzz" Bagby has surely set up a record and we will let you read an interesting account of his exploits and see if you agree with us.

Ralph Bridges Bagby, '16, who was a lieutenant in the Field Artillery, was awarded the Croix de Guerre for action in September, 1918. The translation of the citation reads as follows:

Lieutenant Bagby (Observer of the 88th United States Aero Squadron), an observer noted for his coolness and devotion to duty, on the end of September, 1918, charged with accomplishing an artillery adjustment far behind the lines brought down an enemy machine in the course of a combat against eight German pursuit aeroplanes.

He received his brevet or pilot's license in December and was given his commission as first lieutenant on January 11, 1918. After subsequent training as bombing pilot he was sent to the front in July as a member of the French Escadrille Br. 129, and went through two offensives with them, receiving a citation for the Croix de Guerre on July 16—his first day over the enemy lines. About September 1 he was transferred to the American Army as a flight commander in the 11th Aero Squadron, a friend of his writing that he was one of the first three to be picked as deserving a command, and one squadron head officially reported him as the best American bombing pilot on the western front. The following is an extract from a letter written to Lieutenant Tyler's mother by one of his comrades, under date of December 1, 1918:

It was at the time of the St. Mihiel attack and German aviation was at the height of its last desperate effort to stop American bombardment. John's squadron had been working incessantly, in spite of furious attacks by overwhelming numbers of German planes—twenty or thirty machines in one formation. John was in a formation of six planes coming back from bombing a railroad center (Conflans), when they were attacked by a swarm of sixteen enemy planes. The leaders were shot down, and among them John and his observer.

A memorial service for Lieutenant Tyler was held at the Church of the Pilgrims, corner of Remsen and Henry Streets, on Sunday, March 2, at five o'clock.

The class secretary's mother has written the Editor the following:

Captain Medding has just completed a 2500-mile tour by automobile over all the devastated territory at the front, examining all bridges of the Allies and Germans, and rendering reports on the same—having been in conference with the chief engineers of British and Belgian armies.

His address is given at the head of these notes.

1918

DAVID M. MACFARLAND, Secretary, 626 South High Street, West Chester, Pa.

No report received from the secretary.

The engagement is announced of Miss Helen Carol Horswell to Capt. Gardiner Endicott Johnson. Captain Johnson is at present personnel adjutant of the Casual Officers' Camp, Anger, France.

The "Record," Troy, N. Y., of February 18 has the following:

Joseph Herzstein was yesterday afternoon appointed executive secretary of the Rensselaer County Tuberculosis Association at a meeting of the executive committee of the association at the Union Club. He will assume his duties March 1.

The members of the executive committee feel gratified in being able to secure the services of as competent a young man as they believe Mr. Herzstein to be. Although he is only twenty-five years old, the committee thinks his past record sufficient evidence of the work he may be expected to do in his new capacity. Mr. Herzstein is a college man with several academic degrees.

He obtained the degree of Bachelor of Science at the New York college, where he took a special course in biology and sanitation. The degree of Master of Science was bestowed upon him by the Massachusetts Institute of Technology. Mr. Herzstein has also taken courses in housing, sanitary engineering, public health, industrial hygiene, control of a city's milk supply, vital statistics and a number of other subjects. He recently completed a course in the study of tuberculosis.

Mr. Herzstein, whose home is in New York, comes to this city highly recommended. Among recommendations received are from C. E. A. Winslow of Yale University, D. B. Armstrong of the committee of health and tuberculosis demon-

stration of the National Tuberculosis Association, Fred S. Lee of the College of Physicians and Surgeons, Columbia University, and Prof. W. T. Sedgwick of the Massachusetts Institute of Technology.

For four years Mr. Herzstein acted as secretary of the New York State Committee on Ventilation. During the past six months he saw service in the medical department of the United States army in an engineering training camp of 30,000 men. He ranked as a non-commissioned officer in the office of the camp surgeon.

Julian Plaisted Nutter was accidentally killed while handling a shotgun on October 23, 1917.

From Professor Locke has come the following biographical notice of Masayuki Tatsumo, of Iyo, Japan:

Born 1886, Tokyo, Japan, attended College of Engineers, Tokyo Imperial University. 1917-1918 special student at Tech. 1910-1916 metallurgical engineer, Shesakajima Copper Works, Sumitomo Besshi Mine. 1916-1917 travelling in the United States and Canada, visiting mines and smelters. Present position, metallurgical engineer, Sumitomo Besshi Mine, Iyo, Japan.

1919

E. R. SMOLEY, Secretary, Horse Head Inn, Palmerton, Pa.

With a representation of over fifty, our class sat with the rest of the classes at the alumni banquet, March 1. The following life officers were elected at the meeting before the dinner: D. D. Way, president; E. F. Doten, vice-president; E. R. Smoley, secretary and treasurer.

Now that we are all drifting out to different parts of the globe, let us try nevertheless to keep in touch with each other. This column is here for this purpose and there is no reason why we cannot keep it full of live news. Send in a line and let us know about yourself or any one else you hear of.

Several of the class have written and Mr. G. C. McCarten turned several letters over to me.

Jimmy Reis writes from the Young Men's Christian Association, Gary, Ind., where he is working for the Illinois Steel Company:

At present, I am being broken as a "floater" in No. 4 open hearth. This means that I am learning to take the place of any of the wops who happen to get drunk and fail to show up for work in the morning. So far I have been broken in as delay clerk, whose job is to check up all the charges that go into the furnaces, and to see that all of this is put into it. At present, I am on the mixer. Here we get all the hot metal from the blast furnaces and hold it until the different open hearth need it. Next I go down to the gas house and from there into the cinder pits.

Good luck to you, Jim.

I had a letter from Paul Peltier and he says that "It is the life." You know he is on his way to Turkey. The letter that I received was written on board ship en route for Brest.

Oscar Mayer writes from Cananea, Sonora, Mexico, where he is with the Cananea Consolidated Copper Company, S. A.:

We're a big copper mine, and we're near, but on the wrong side of the Mexican border. We're on the Continental Divide, we're way up in the air, and we're very cold. We're in a mountain range and on the border of a broad desert, and when we're not choking with sulphur gas, we're gazing over a hundred miles of yellow sand, to where lies Arizona. God bless her!

This is the safest part of Mexico to be in. You see there are no trees for bandits

to hide behind, and with ordinary luck, you could see a troop approaching sixty miles away. Not long ago, they held up the customs officers on the border, shot five of them, and got away with eighty thousand dollars.

I should not be surprised if the plant will soon be shut down entirely, as it was last year when the peons began to make demands on the company. If that comes, I am going to spend a few months kicking around in the interior.

From R. B. McMullen:

I have but a few days ago returned from France, having taken an active part throughout the summer and fall with the First Gas Regiment, Chemical Warfare Service. The regiment, though small, was the only combatant gas troop in the United States Army, so we saw a good deal of tough fighting all the way from Flanders to the Vosges. I expect to be discharged here at the Chemical Warfare camp, tout de suite, and then to resume work in Course X at Tech. I found your letter waiting for me and beg to be admitted to the 1919 Alumni Association for the present, at least, as I would most certainly enjoy the banquet at the Walker Memorial on March 1.

Sure enough, Mac was there.

Upon Harold Edward Langley was bestowed the honor of pressing the button which sent the "Kisnop," the first steel ship to be built and launched in New Hampshire, to the water.

Richard S. Everit received his commission as second lieutenant at the Officers' Training School at Fort Monroe.

George A. Beeche has received his discharge from the Tank Corps and has returned to Technology.

Donald D. Way is with the Singer Manufacturing Company, Elizabethport, N. J., after having received his discharge from the Signal Corps.

George Wells Root died in the service on December 25, 1918, at an American base hospital in England. Root was twenty-two years of age last November. He left Technology during his sophomore year, went to France with the Technology Ambulance Unit, being transferred to the Camion Munition Service connected with the French army. Here he served six months and then returned to the United States, and enlisted in the spring of 1918 in Company A, 303d Batt., Heavy Tank Corps, stationed at Camp Colt, Gettysburg, Pa. He departed from this camp during the summer and arrived in England in August, 1918. Soon after landing he was stricken with influenza and then pneumonia.

Henri DeBonneval has been in the French army since a year ago last June. His address is 5 C. M., 234th Regt. of Inf., Section 136, France.

Robert F. Lewis is out of the service and has returned to Technology.

Working for the New Jersey Zinc Company in Palmerton, Pa., with me are George C. McCarten, Edmund J. Flynn, and Royden L. Burbank. Mac has just returned here after receiving a commission in Engineers.

Albert B. Reynolds' address is 225 Union Street, Schenectady, N. Y.—Herbert Barrett has been commissioned a second lieutenant with the 9th Inf. in France.—Arthur C. Kenison is with the Underwriters' Laboratories, 87 Milk Street, Boston, Mass.—Charles J. Farist is in the Chelsea Naval Hospital laid up with pneumonia.—John M. Erving is in the Army of Occupation, Germany.—Charles B. Maloy is still in France with the 26th Division.—Lansing M. Quick has received his honorable discharge from Naval Aviation and has returned to Tech.

Lieut. Harry M. Atkinson, Jr., son of Col. Harry M. Atkinson, died on November 2 of pneumonia in a hospital at Angers. He had been taking his last training at an artillery school in the French town, preparing to go to the front. Lieutenant Atkinson was graduated from Harvard and had supplemented his work there with two years'

training at the Massachusetts Institute of Technology. He won his commission at Plattsburg and was assigned as instructor to several American camps, before going abroad.

Norwood P. Johnston is now out of the service, and back at his home. He is planning to resume his studies at Tech.

E. R. Smith has received his discharge from the army, and has resumed his work at Tech.—B. Darling is with the Vulcan Fibre Company, Boston, in the sales department.—C. C. Stewart, R. S. Bolan and A. G. Richards are working for the National Aniline Company at Wilmington, Delaware.—A. F. O'Donnell, D. K. Webster and B. H. Sherman are with the DuPont Powder Company in Delaware.—W. T. Hall, T. Shedlovsky, A. W. Contieri, C. L. Nutting, L. B. Smith are at Tech, taking advanced work.—G. G. Fleming has returned to Tech, after his discharge from the Motor Transport Corps.—W. S. Frazier and F. E. Britton are in the cast of this year's Tech show.

Don't forget to send in some live news, '19 men.

American University Union IN EUROPE

PARIS HEADQUARTERS

8, Rue de Richelieu
(Royal Palace Hotel, facing Theatre Francais)

Telephone: Central 05-03
Cable Address: "Royapal, Paris"

THE AMERICAN UNIVERSITY UNION was founded by about thirty American colleges to aid all American college men in any form of service abroad. West Point and Annapolis are honorary members of the Union. Many more colleges will doubtless join.

LOCATION—The Union has obtained for its headquarters the exclusive use of a first-class hotel and offers the privileges of a residential club in the very center of Paris, close to the Palais-Royal station of the subway, from which all parts of the city can be reached quickly and cheaply.

COLLEGE REGISTRATION—All college men who come to Paris are urged to register at the Union. Harvard, Massachusetts Institute of Technology, Michigan, Princeton and Yale have already established bureaus at the Union in charge of special representatives. The interests of other colleges will be served by the general staff.

All American college men are urged to register by mail their name, college, class, degree (if any), European address, and name and address of nearest relative at home. Send to *Executive Committee, American University Union in Europe, 8, Rue de Richelieu, Paris.*

TECHNOLOGY BUREAU—Since the signing of the armistice there is even greater demand for the Union and the Technology Bureau in Paris. The registration was large during the war but it has increased since then many fold.

THE M. I. T. COMMITTEE FOR NATIONAL SERVICE endorses this activity and plans to maintain the Technology Bureau during this calendar year. The Committee urges Technology Alumni, on this account, to contribute to the Fund for National Service by which the Bureau is maintained. All remittances sent to the Alumni Association, M. I. T., Cambridge, Mass., will receive prompt acknowledgment.